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FETO MATERNAL OUTCOME OF VAGINAL BIRTH AFTER CAESAREAN SECTION

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ABSTRACT

Backgrounds: A heightened awareness must be present amongs the obstetrician while taking the decision to perform the first caesarean section, as it decides the future obstetrics career of the women. Because of the rise in caesarean section rate in recent decades, the question of how to manage the subsequent deliveries become important. Vaginal birth after caesarean section has long been proposed as an alternative measure to reduce repeat caesarean section rate. Our present study to evaluate the fetomaternal outcome of vaginal birth after caesarean section.

Methods: A prospective observational study was conducted to evalauate the feto maternal outcome of VBAC in Guwahati medical college ,Gauhati, Assam . Total 100 women with previous history of once previous caesarean section was taken for the study.

Results: In the present study 75% cases had successful VBAC and 25% underwent a repeat emergency LSCS for failed trial of vaginal delivery. Cervical dilation of more than 3 cm at time of admission was a significant factor in favour of a successful VBAC. Birth weight more than 3 kg was associated with a lower success rate of VBAC. The incidence of scar rupture was 0% in present study. There was no maternal mortality in this study.

Conclusion: With respect to maternal and fetal safety and success rate and adverse effects of VBAC ,the results of this study was promising and compatible with the global data. It shows that a trial of VBAC can be offered to pregnant women without contraindications with high success rate.

KEYWORDS : vaginal birth after caesarean section(VBAC),Trial of labour after caesarean section(TOLAC),elective repeat caesarean sction, scar tenderness, scar rupture.

INTRODUCTION:

Vaginal birth after caesarean section (VBAC) is one of the strategies developed to control the rising rate of caesarean section. It is a trial of vaginal delivery in selected cases of previous caesarean section in a well equipped hospital or tertiary care centre. Trial of labour after caesarean section (TOLAC) refers to a planned attempt to deliver vaginally by women who had a previous caesarean delivery .VBAC is associated with decreased maternal morbidity and decreased risk of complication in future pregnancies as well as decreased in the overall caesarean delivery rate at the population level.

However with the increasing use of caesarean sections, is a growing awareness of its potential risk. Maternal mortality is 5-7 times more in caesarean section (ritche1986) compared to vaginal deliveries (1). Maternal morbidity is definitely increased in terms of maternal primary atonic post partum hemorrhage, scar rupture or scar dehiscence, anesthetic hazards, post operative infection, thromboembolism, caesarean hysterectomy, etc.

METHODS:

The clinical study was undertaken in the Department of obstetrics and gynaecology, GAUHATI MEDICAL COLLEGE AND HOSPITAL, ASSAM. It is a cross sectional observational study. Total 100 selected cases of post caesarean pregnancies were taken up for the study during the period between 1st June 2019 to 31st May 2020. Patients with the following criteria were included in the study:

1. History of one previous caesarean section with lower segment transverse uterine scar.
2. Clinically there was no cephalopelvic disproportion
3. Non recurrent indication for the previous section.
4. Normal placental localization.
5. Cephalic presentation , gestational age 37-40 week.
6. There was no other medical/obstetrical contraindication for vaginal delivery.
7. Scar thickness is more than 3mm on USG(wherever possible).
8. Willing for TOLAC.
9. Women with favourable cervix(bishop score>6).

Exclusive Criteria

1. Refusal for consent
2. Contracted pelvis
3. Presence of medical or obstetrics high risk factors.
4. Estimated fetal weight >3.5kg
5. Placenta previa
6. Preterm and post dated pregnancy
7. Women with unfavourable cervix (bishop score<6).
8. Classical or T shaped incision in previous caesarean section.
9. History of interval between the previous child and this pregnancy was <18months.

Patients were counselled about the risks and benefit of VBAC and informed consent was taken. Thorough general and obstetrics history specifying the reason of previous caesarean section was taken .A standard examination to assess the fetal presentation, fetal weight, fetal heart rate, scar tenderness, vaginal examination and adequacy of pelvis was carried out. All routine investigations and other special investigations wherever necessary were carried out. Samples were collected and sent for cross match and one unit of blood was kept ready if needed. All patients were allowed to go into spontaneous labour and progress was monitored by partograph.close supervision and one on one care was kept for early recognition of scar dehiscence by monitoring maternal tachycardia, fetal heart rate, scar tenderness.

Emergency caesarean section done if patient developed scar tenderness, sign of impending rupture, non progress of labour, fetal distressor if patients refused for further trial. Patients were closely observed in the post partum periods for any complications. Neonatal outcome was analysed in relation with APGAR SCORE and perinatal morbidity and mortality.

RESULTS:

Table 1 shows the incidence of vaginal delivery achieved in 100 selected study population of 100 post caesarean cases during the periods. The incidence of repeat section after failed trial of labour is also shown below.

Total number of post caesarean cases taken for study	Successful vaginal delivery	percent	Repeat section after failed trial of labour	percent
100	75	75%	25	25%

2.Obstetricscharacterstics Of Patients Shown Below

Obstetrics characterstics	No of cases n=100	Vbac study	Repeat cs group	
Gestaional age	-	37.2±2.13 SD	38.5±2.15 SD	
Intrapartum periods Latent phase Active phase	 38 62	 52.6%(20) 88.8%(55)	 47.3%(18) 11.29%(7)	 P=0.0 167
Interdelivery periods >1.5-3 years 3-4.5 years >4.5 years	 12 42 46	 50%(6) 73.80%(31) 82.61%(38)	 50%(6) 26.19%(11) 17.39%(8)	 P=0.0 624
H/O vaginal delivery before and after caesarean scction	Total 6 cases had vaginally delivered.			P=0.0 03

Table No 3: Mode Of Delivery In Study Group

Mode of delivery	Number of cases	Percentage
Sponteneous vaginal delivery without RMLE	5	5%
Spontaneous vaginal delivery with RMLE	30	30%
Forcep delivery	15	15%
Ventose delivery	25	25%
Lscs	25	25%
P value	<0.0001	

Table 4shows The Indication For Repeat Section After Failed Trial Of Labour.

Indication for repeat section	Number of patients	percentage
Prolonged 1st stage	8	32%
Fetal distress	16	64%
Scar tenderness	1	4%
P value	0.001	

Table 5 Shows The Incidence Of Maternal Morbidity And Mortality In The Study Group.

MORBIDITY	Successfully vaginal delivery (number)	percentage	Repeat section after failed trial	percentage
Febrile puerperium	1	1.3%	1	4%
Wound infection	0	0%	3	12%
PPH	1	1.3%	0	0%
Operative injury	2	2.66%	0	0%
Feeding difficulty due to cracked nipple	1	1.33%	0	0%
Scar rupture	0	0%	0	0%
mortality	0	0%	O	16%
Total	5.	6.66%	2	16%

Neonatal Outcome Shown In Table No 11 Neonatal Outcome Shown Below

Neonatal outcome	No.of cases	VBAC	REPEAT CS GROUP with no of cases
APGAR at 1 min<7	8	10.66%	60%(15)
APGAR at 5 mint<7	4	5.33%	60%(15)
NICU admission	7	9.33%	68%(17)
Neonatal death	1	1.33%	NIL

DISCUSSION

The medical literature of the last three decades have reflected the concern of various centers throughout the world on this issue of VBAC and many article and studies have been put forward which claim that the old view "once a caesarean section, always a caesarean" is no longer tenable. Therefore, attempts have been made to lower the limit of caesarean birth without sacrificing the accepted standard of obstetric and perinatal care.

The incidence of post caesarean pregnancy in GAUHATI MEDICAL COLLEGE and hospital during the study was 17.92%. In our study, The incidence of successful trial of labour in this study was 75%. In 2019.a study done by drdaneti Sridhar and co worker in northern Andhrapradesh, out off 400 trial group, 324 having successful VBAC. That is 78.1%(2). Another study Shilpagupta and co worker did a study in GMERS medical college Ahmedabad in 2018-2019 ,total VBAC success rate was 58% with 2% scar rupture rate.(3).

The study shows that patients who were operated previously for hypertensive disorder, fetal distress and malpresentation, had a better chance of successful vaginal delivery than those operated for indications such as induction failure or and cephalo pelvic disportion . According to Lekshinibalanchandra 2014 studied that 67.34% VBAC with previous caesarean section for fetal distress and 46.15% with failure of progress.(4) Another study vidyadar b bangal 2013 did a prospective observational study in rural area in central india shows that those patient whose previous caesarean section done by fetal distress and malpresentation had better VBAC success rate.(5).

It was seen that women with cervical dilation of more than 3 cm at time of admission in the hospital had better chance of successful vaginal delivery than those less than 3cm .42 Patients came with cervical dilation more than 3cm having vaginal birth after caesarean section..According the Vidydhar B Bangal study and Shilpa Gupta study also showed that patient those came with more than 3 cm dilation of cervix had more successful vaginal delivery rate.

According to Shilpa Gupta et al 2019 carried out a prospective observational study to assess the success rate and its outcome in GMERS hospital Ahmedabad mean gestational age group in VBAC group 37.2 and 31.1% had history of vaginal delivery before and after previous caesarean section. In this study75.9% patients came in active phase of labour. And 51.6% VBAC group had interval period of previous caesarean section and present pregnancy were more than 4.5 years.

The variable associated with success of trial of labour in previous caesarean section were evaluated in this study. The interval between previous caesarean section and current pregnancy is one such variable. According to vidydhar b bangastudy,it was stated that2% scar rupture rate was seen in those patients whose interval periods between previous pregnancy was less than 15 months.

The most important and feared complication of post caesarean pregnancy is scar rupture. In our study scar rupture rate is 0%. which was compared with different study. Now a days due to proper monitoring by electronic cardiotopography scar rupture is minimal during labour. In both vidydhar b bangal et al and shilpaet al got 2% scar rupture rate as in both cases the samples included cases of both above and below 18 months inter delivery interval between previous delivery to recent pregnancy.

The APGAR score of the babies at 1mints and 5 minutes was taken . The APGAR score was less than 7 at 5 mints in only 5.33% of the babies delivered vaginally ,while it was 12%in those delivered by caesarean section after failed trial of labour. According to Shilpa Gupta and co worker study 2019, 8.6% baby with vaginally delivered group. The maternal morbidities in the entire study population was 6.66% .Morbidities in failed trial group was slightly more (16%) than in vaginal .The incidence of operative injury (2.2%) and PPH(1.1%) was more in vaginal delivered group patients,but the incidence of wound infection was more in the repeat section group(12%) than in vaginally delivered group.

CONCLUSION:

To reduce the escalating rate of total caesarean section world-wide VBAC is an alternative option which should be encouraged in carefully selected patients. However it should be carried out in a well-equipped institute with close fetal monitoring and availability of blood and trained personal. Thus "once a caesarean section, always a hospital delivery" and not "once a caesarean, always a caesarean section". Analysis of the result and observations of the present study shows that under close supervision, in properly selected cases with once previous caesarean section for non-recurrent indication, higher rate of successful vaginal delivery is possible without maternal and fetal complications.

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Conflicts Of Interest: none interest

Ethical Approval: The study was approved by the Ethical commitee of Srimanta Sankaedeva University of H ealth Sciences Gauhati

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