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"A Study of Vaginal Birth after Previous Caesarean Section in A Tertiary Care Centre"

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Abstract:
Background: *Caesarean section is one of the common abdominal surgery on women in most countries. One of the most common indications for repeat caesarean section is previous caesarean delivery. Later due to increasing rates of cesarean section (CS) suggestions were made that vaginal birth after CS (VBAC) might help in reducing the rates of CS. So trial of labor in cases of previous CS (PCS) has been accepted as a way to reduce the overall CS rates. VBAC is believed to be appropriate for most women with a history of lower segment transverse caesarean section. Present study was undertaken to assess the success and safety of VBAC in selected cases of one previous caesarean section and to evaluate the maternal and fetal outcome.*
Aims & Objectives:
- *To assess the safety and success rate of vaginal birth after caesarean section in selected cases of one previous caesarean section*
- *To study maternal and fetal morbidity and mortality.*

Methods: *This is an observational study conducted in the department of obstetrics and gynecology, Gandhi medical college, Secunderabad over 2 years.*
Results: *In this study comprising of 100 patients with one previous caesarean section, 68% of patients delivered vaginally, Repeat LSCS was done in 32 (32%) patients in trial group, Scar dehiscence was noted in 9.3%, uterine scar rupture in 0% of patients, 4 (80%) out of 5 Patients with history of VBAC in previous pregnancy delivered by VBAC. 6 (85.71%) out of 7 patients with history of normal vaginal delivery before caesarean section delivered by VBAC. In 88 patients with no history of vaginal delivery 58 (65.9%) delivered by VBAC, Maternal morbidity was significantly low in vaginal deliveries compared to caesarean deliveries, no maternal deaths in our study, Apgar >8 were 55 (80.88%) in VBAC and 21 (65.62%) in Emergency repeat caesarean section, Higher VBAC success rate in birth weight less than 3kg and no still births and neonatal deaths in both VBAC and Failed Trial of Labour after caesarean cases.*
Conclusion: *Management of patients with previous caesarean section includes health care personnel providing proper antenatal counseling regarding need for institutional delivery and option of VBAC, Correct analysis of prior indication for caesarean section, A well-defined management protocol for patients selected for trial of labour, close fetal and maternal surveillance. Delivery of patients with previous caesarean section should be done in a well-equipped hospital, where facilities for immediate intervention are available if necessity arises so as to reduce / prevent maternal and perinatal morbidity and mortality.*
Key Words: *VBAC (Vaginal Birth After Caesarean), TOLAC 9Trial of labour after caesarean),*

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I. Introduction

Caesarean section is one of the common abdominal surgery on women in most countries. One of the most common indications for repeat caesarean section is previous caesarean delivery[1].

Before 1970s the phrase "once a cesarean, always a cesarean" originally enunciated by Cragin in an article titled "Conservatism in Obstetrics" published in the New York medical journal in 1916 dictated obstetric practice[2]**.** Nevertheless, the dictum began changing as improvements in obstetric care made a trial of labour after

a previous caesarean delivery safer for both the mother and the infant. It has been replaced by "once a caesarean, always a hospital delivery"[3]. Trial of delivery after one prior caesarean section is therefore considered a key method of reducing the overall caesarean section rate.

Later due to increasing rates of cesarean section (CS) suggestions were made that vaginal birth after CS (VBAC) might help in reducing the rates of CS. So trial of labor in cases of previous CS (PCS) has been accepted as a way to reduce the overall CS rates.

The success rates for VBAC range between 60%–80% after one previous lower segment caesarean incision[4]**.** There is evidence of safety of trial of labor, with decrease in iatrogenic maternal morbidity and mortality. Factors associated with successful vaginal birth in a trial of labour include age < 40 years, prior history of vaginal birth, cervical effacement greater than 75% on admission, and cervical dilatation 4 cm or more on admission[5]**.** VBAC is believed to be appropriate for most women with a history of lower segment transverse caesarean section.

However several factors increase the likelihood of a failed trial, which in turn may lead to increased maternal and perinatal morbidity including uterine rupture and related fetal morbidity and mortality rates[6].

In view of this, trial of labour in women with previous caesarean section remain controversial and continuous critical audit of the trends is imperative.

Present study was undertaken to assess the success and safety of VBAC in selected cases of one previous caesarean section and to evaluate the maternal and fetal outcome.

AIMS & OBJECTIVES:

- To assess the safety and success rate of vaginal birth after caesarean section in selected cases of one previous caesarean section
- To study maternal and fetal morbidity and mortality.

II. Materials And Methods:

STUDY AREA:

This is an observational study conducted in the department of obstetrics and gynecology, Gandhi medical college, Secunderabad.

STUDY POPULATION:

The study group consists 100 pregnant women with previous history of caesarean section undergoing trial of labour.

SAMPLE SIZE: 100

STUDY DESIGN: Prospective observational study.

STUDY DURATION : November 2018 to May 2020

INCLUSION CRITERIA:

1. Singleton pregnancy with previous lower segment caesarean section
2. Cephalic presentation
3. Term gestation
4. Non recurrent indication for previous caesarean section
5. Adequate pelvis
6. Women who gave informed written consent

EXCLUSION CRITERIA

1. Two or more previous caesarean section
2. Previous myomectomy scar
3. Previous classic section
4. Fetal weight more than 4kg
5. Inter delivery interval of less than 18 months
6. Contracted pelvis
7. Termination of pregnancy for anomalous fetus
8. Intrauterine death
9. Multiple pregnancy, malpresentation, placenta previa
10. Medical and obstetric complications

After obtaining clearance and approval from ethical committee, written consent was taken from all women recruited into the study after explaining the nature of the study.

Demographic data was collected. Information about past obstetric history was noted in detail.

- Indication of previous caesarean section.
- History of any full term vaginal deliveries prior to or after previous caesarean section.

- History of complications following previous caesarean section such as need for blood transfusion, foul smelling lochia, fever, wound and /or systemic infection and prolonged hospitalization.
- A general physical and systemic and obstetric examination was done.
- Outcome of present pregnancy in terms of mode of delivery.
- Maternal outcome, morbidity and mortality in terms of duration of hospital stay, requirement of blood transfusion, wound infection, hysterectomy, scar dehiscence/rupture, ICU admission.
- Neonatal outcome was assessed in terms of Apgar score at 1st and 5th minute, need for NICU admission and the indication for the same and neonatal mortality.
- Data collected was recorded in the study proforma (ANNEXURE I).

STATISTICAL ANALYSIS

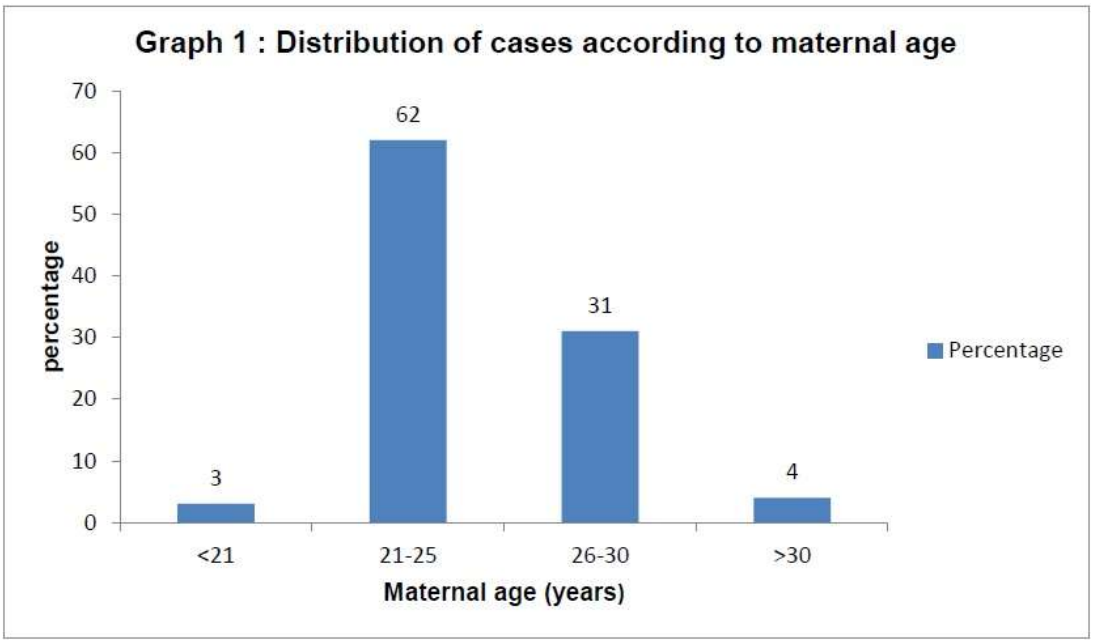
The data collected was analyzed statistically. The qualitative variables was expressed in percentage and continuous variables were measured and expressed using descriptive statistics. Graphical representation was used wherever necessary.

III. Results And Analysis

The following observations were made during the study. Total number of patients recruited were 100 who fulfilled inclusion and exclusion criteria and willing for the study.

Baseline Characteristics :

1. **Age :** Age of the study group ranged from 18 to 35 years. Mean age is 26 years. 62% of women between 21 to 25 years and 31% between 26 to 30 years.



2. **Socioeconomic status :** The study group are classified into different groups based on Modified Prasad's classification 2018. Majority of patients belong to middle class 51%, 32% belong to lower middle class and 17% belong to upper middle class.
3. **Parity :** Majority of women in our study group are primiparous with single prior obstetric event being the first caesarean section which is 88% of study population. 12% of study population are multiparous out of which 5% of women had a normal vaginal delivery after previous caesarean section whereas 7% of women had a normal vaginal delivery prior to caesarean section.
4. **Previous Abortion:** 15% of the study population had a previous miscarriage as an obstetric event along with previous caesarean section. 8% of them had a prior history of curettage for the miscarriage and 7% of women had no prior history of curettage.

TABLE 1: OTHER BASELINE CHARACTERISTICS

Parameters	Frequency %
Socioeconomic status (n%)	
Upper class	0
Upper middle class	17
Middle class	51
Lower middle class	32
Lower class	0
Parity (N%)	
1	88
>1	12
Previous abortion (N%)	15
Previous VBAC (N%)	5
History of vaginal delivery after caesarean section	7

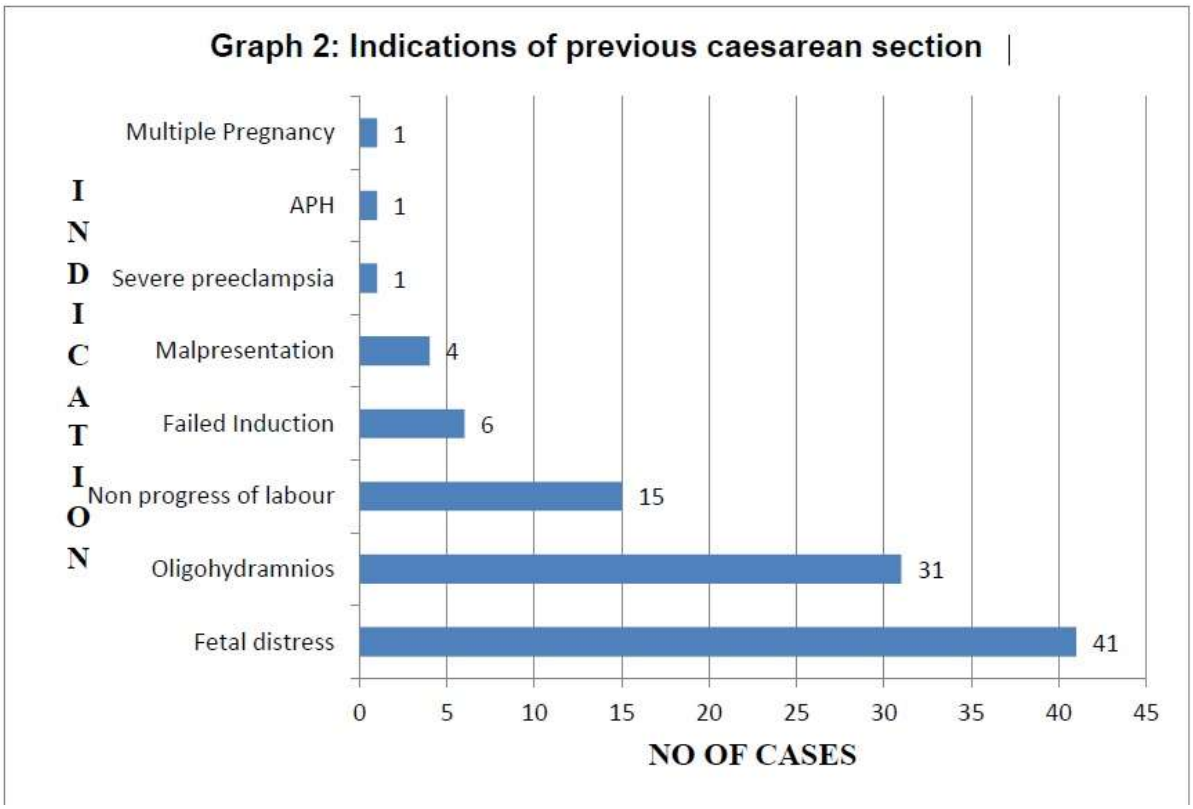
Previous Obstetric History:-

The details of the previous obstetric history which resulted in the first Caesarean section are shown below.

a) Mean inter-pregnancy interval:- The interpregnancy interval from the previous pregnancy is calculated in months. The mean inter pregnancy interval was 37.73+12 months.

b) Period of gestation at previous Caesarean section:- All the previous sections taken for the study were done in term pregnancy. 46% of the previous Caesarean sections were done at a gestation of 38-40 weeks and 40% of them are done from 40-42 weeks.

c) Indication of previous Caesarean section:- The most common indication for which the previous Caesarean section was done was fetal distress which accounted for 41%.

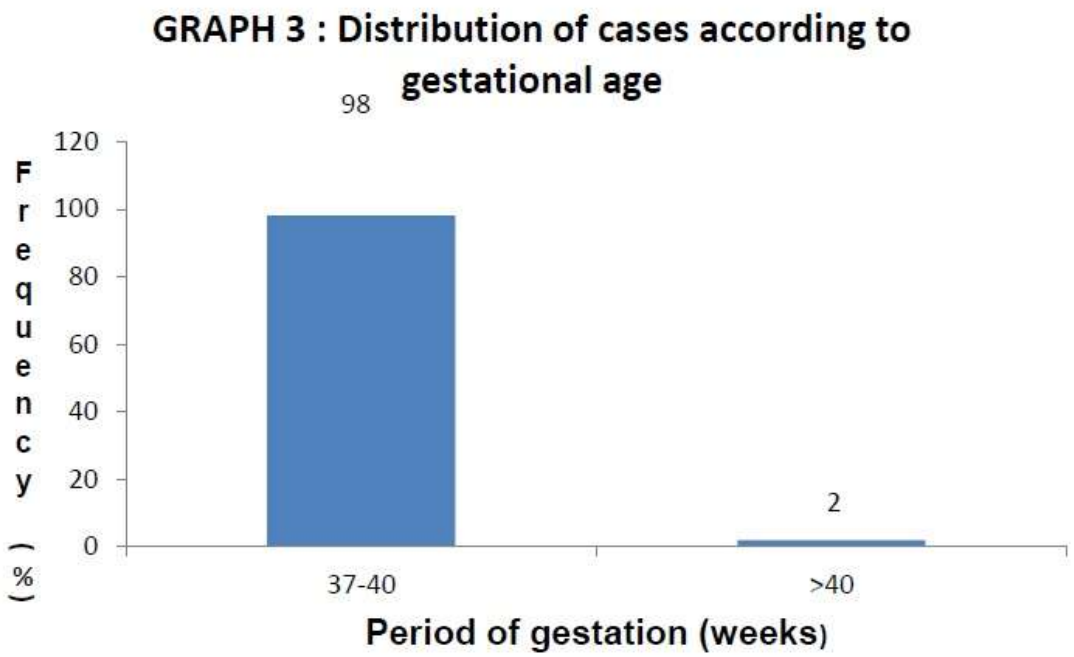


d) Birth weight of previous baby: The mean weight of previous baby is 2.89 Kg.

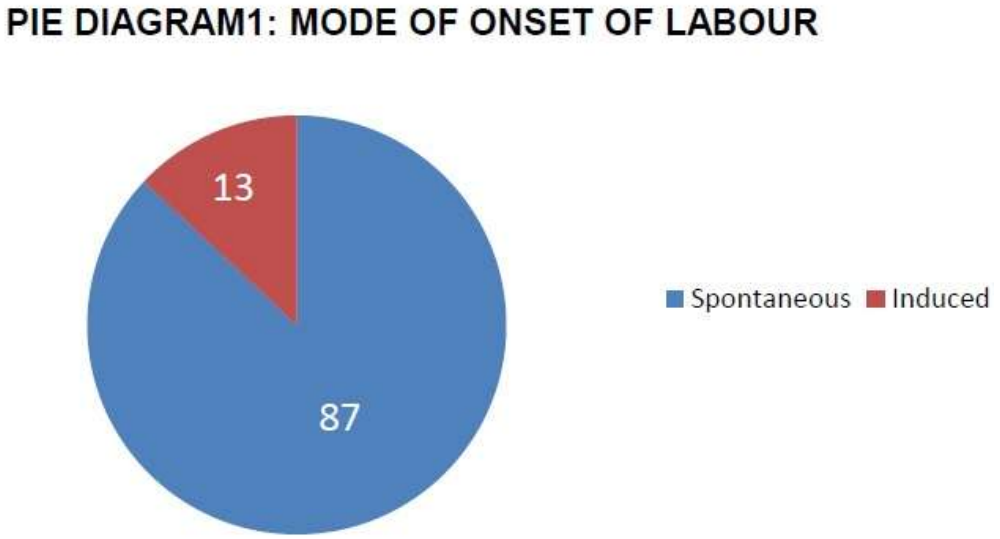
PRESENT PREGNANCY :

The details of present pregnancy are given below

1) **Period of gestation :** Maximum number of patients i.e. 98 (98%) in the study group were between 37 to 40 weeks of pregnancy. 2% cases with gestation age greater than 40 weeks.

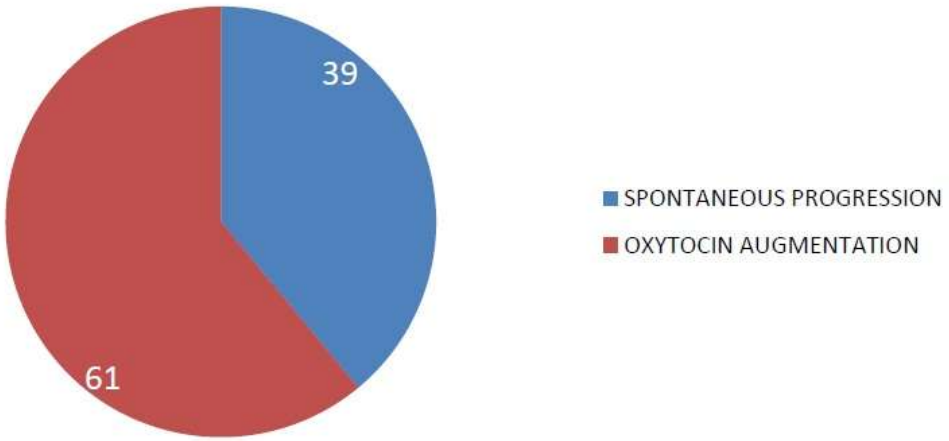


2) **Estimated fetal weight (EFW):** Estimated fetal weight measured by ultrasonography is noted. Mean estimated fetal weight is 2.9 Kg. The minimum fetal weight measured was 2kg and maximum 3.4kg.
3) **Mode of onset of labour:** Out of 100 patients who were given trial of labour after caesarean section (TOLAC), 87(87%) had spontaneous onset of labour and 13(13%) were induced with Foley's bulb.



INTRAPARTUM DETAILS :
1. Oxytocin for augmentation : Among 100 cases allowed for TOLAC 61(61%) of cases were augmented with low dose oxytocin and 39(39%) cases had spontaneous progress of labour.

PIE DIAGRAM 2: OXYTOCIN AUGMENTATION OF LABOUR IN VBAC CASES

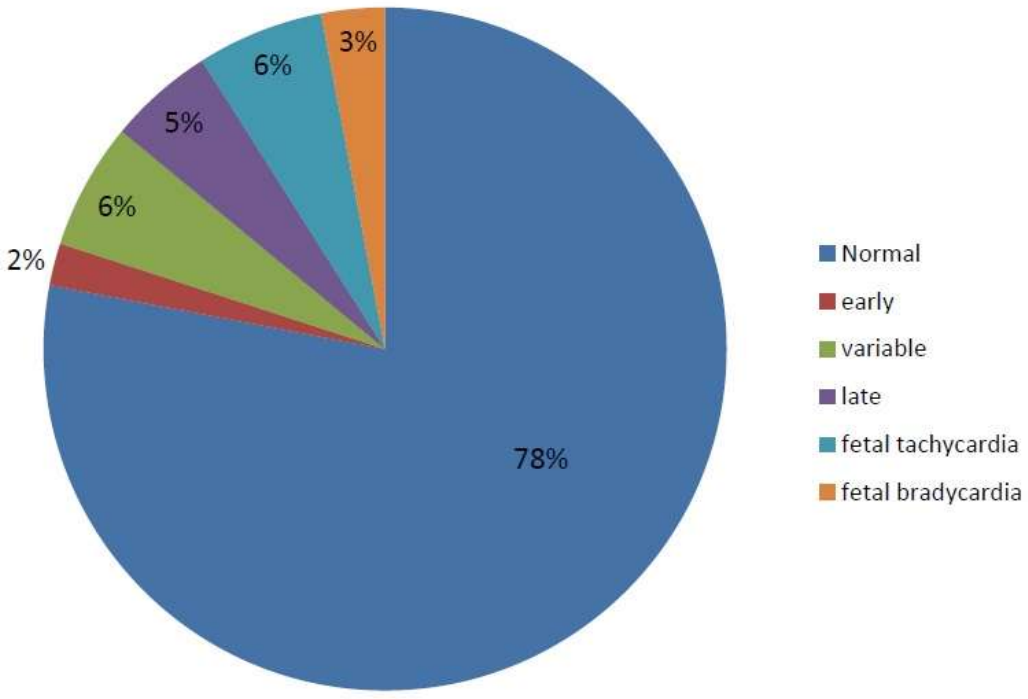


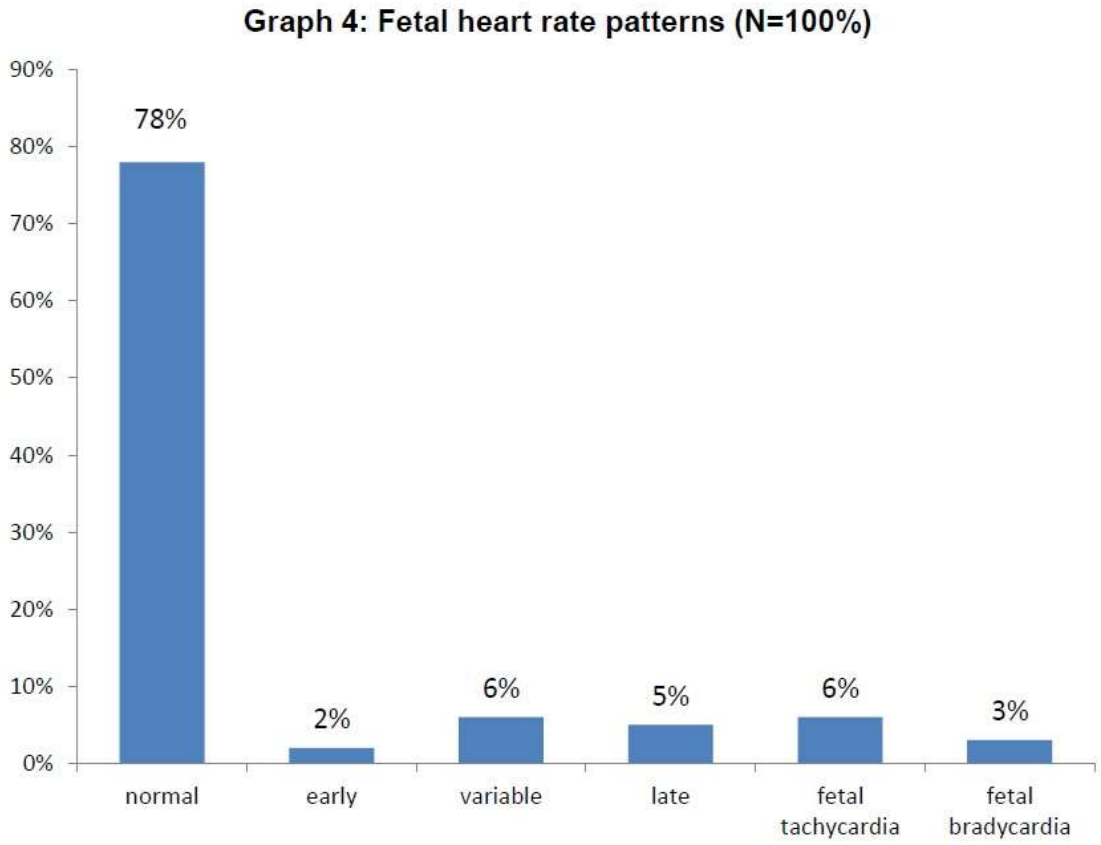
2. Duration of first stage: The mean duration of first stage is 327.94+78 minutes in patients who delivered vaginally.

3. Active phase of labour : Out of all patients 21 (21%) couldn't enter active phase of labour whereas 79 (79%) of women entered active phase of labour. Out of 79 patients in active phase 68 delivered by VBAC and 11 by repeat caesarean section. Indication for repeat caesarean section were 7 non progression of labour 3 fetal distress, 1 due to doubtful scar integrity.

4. Fetal heart rate pattern: No fetal heart rate abnormalities in 78% (78) of patients . Different patterns of fetal heart rate abnormalities are seen in 22% (22) of patients.

PIE DIAGRAM 3: Fetal heart rate patterns (n=100%)





5. Nature of liquor : 92 cases had clear liquor and 8 of them had meconium stained liquor. No cases with blood stained liquor.

6. Duration of second stage of labour : The mean duration of second stage of labour was 33.60±8.5 minutes.

7. Maternal pyrexia : No cases.

TABLE 2 : INTRAPARTUM DETAILS

Oxytocin requirement n (%) Spontaneous Augmentation with oxytocin	100% 61% 39%
Active phase of labour n(%) YES NO	100 79 21
Duration of first stage in minutes (MEAN ± SD)	327.94±78.02
Fetal heart rate pattern n(%) Normal Early decelerations Variable decelerations Late decelerations Fetal tachycardia Fetal bradycardia	100 78 2 6 5 6 3
Nature of liquor n(%) Clear Meconium stained	100 92 8
Duration of second stage of labour in minutes (Mean+SD)	33.60±8.5
Maternal pyrexia (n)	0

OUTCOME PARAMETERS :

1. Mode of delivery: The primary outcome of the study is mode of delivery. Out of 100 patients who were given trial of labour, 68 (68%) patients had vaginal delivery and 32 (32%) patients underwent Emergency repeat caesarean section. Out of 68 vaginal deliveries 19 (27.9%) had assisted vaginal delivery. Among assisted

vaginal deliveries 10 patients (52.6%) had vacuum assisted delivery and 9 patients (47.36%) delivered by outlet forceps. Labour was augmented with low dose oxytocin wherever necessary.

PIE DIAGRAM 4 : MODE OF DELIVERY (n=100)

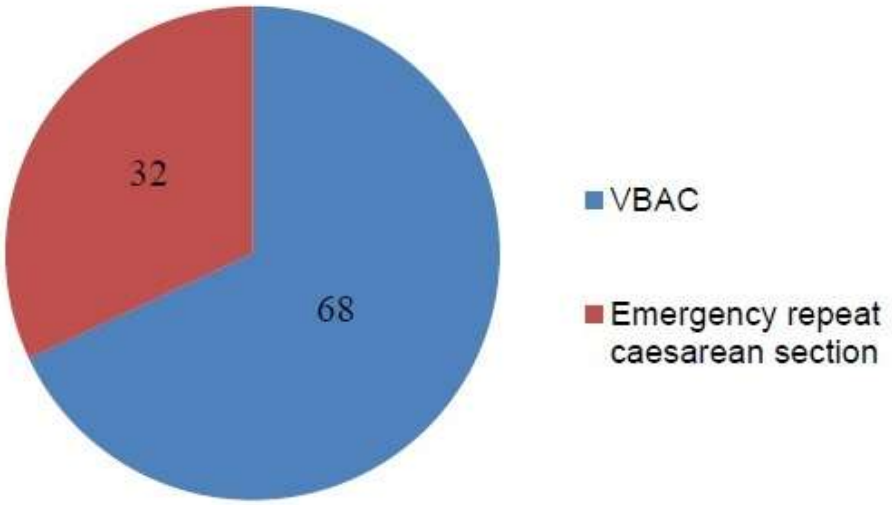


TABLE 3: DISTRIBUTION OF CASES ACCORDING TO MODE OF DELIVERY (N=100)

Mode of Delivery	No. of Patients	Percentage (%)
Emergency repeat LSCS	32	32
Spontaneous Vaginal Delivery	49	49
Assisted Vaginal Delivery (n=19)	19	19
Vacuum	10/19 = 52.6%	
Forceps	9/19 = 47.36%	
Total	100	100.0

PIE DIAGRAM 5 : Indications of Emergency repeat caesarean section

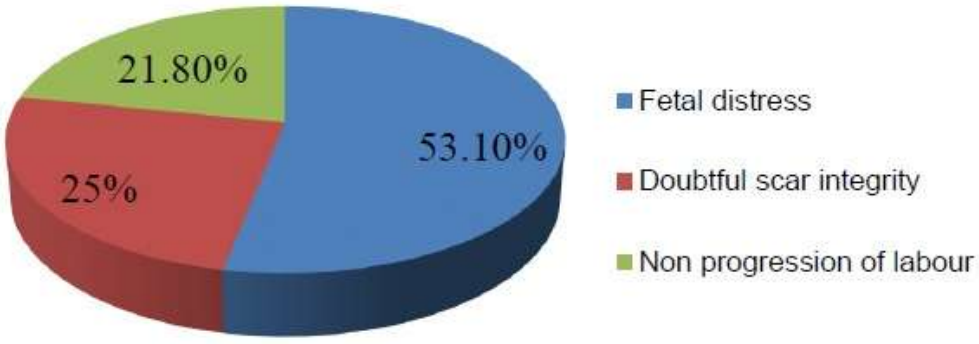


TABLE 4: VBAC RATE BASED ON INDICATION OF PREVIOUS CAESAREAN SECTION

Indication of previous caesarean section	VBAC	ERCS
Non progression of labour (n=15)	8 (53.3%)	7 (46.6%)
Others (n =85)	60 (70.58%)	25 29.41%)
Fetal distress	27	14
Malpresentation	3	1
Oligohydramnios	22	9
Failed induction	5	1
Antepartum Hemorrhage	1	0
Severe Preeclampsia	1	0
Multiple pregnancy	1	0

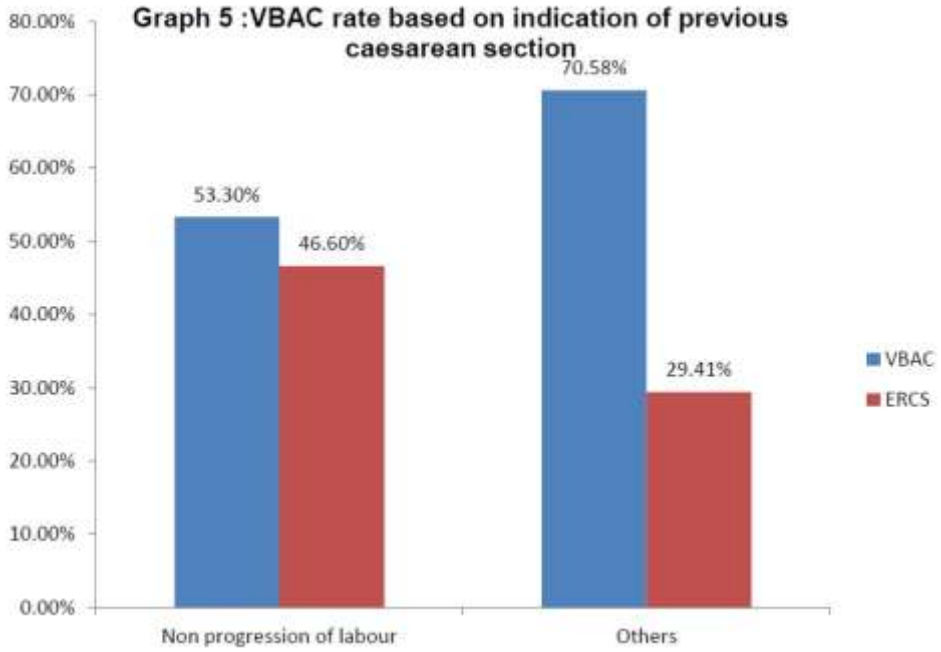


TABLE 5: VBAC SUCCESS IN PREVIOUS VAGINAL DELIVERY:

	VBAC	Failed TOLAC
History of VBAC (n = 5)	4 (80%)	1 (20%)
History of NVD (n=7)	6(85.7%)	1 (14.28%)
No History of vaginal delivery (n=88)	58 (65.9%)	30 (34.09%)

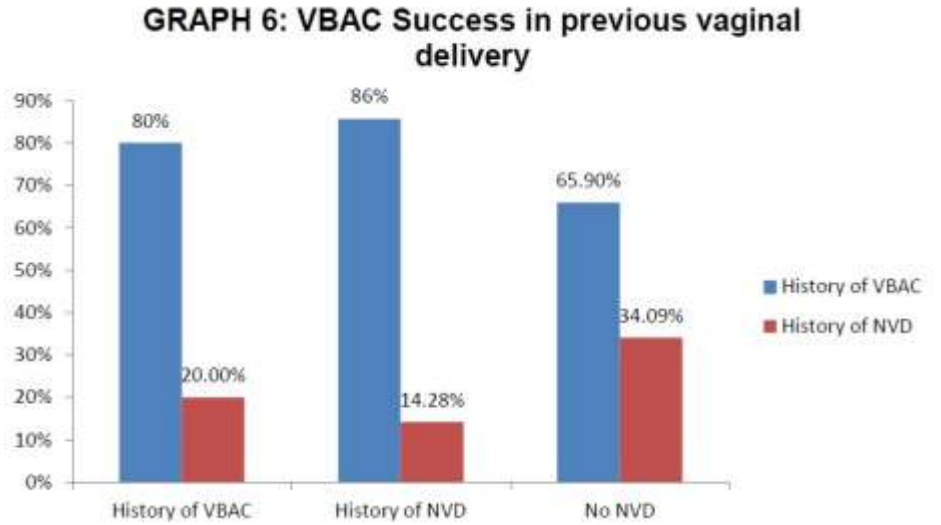
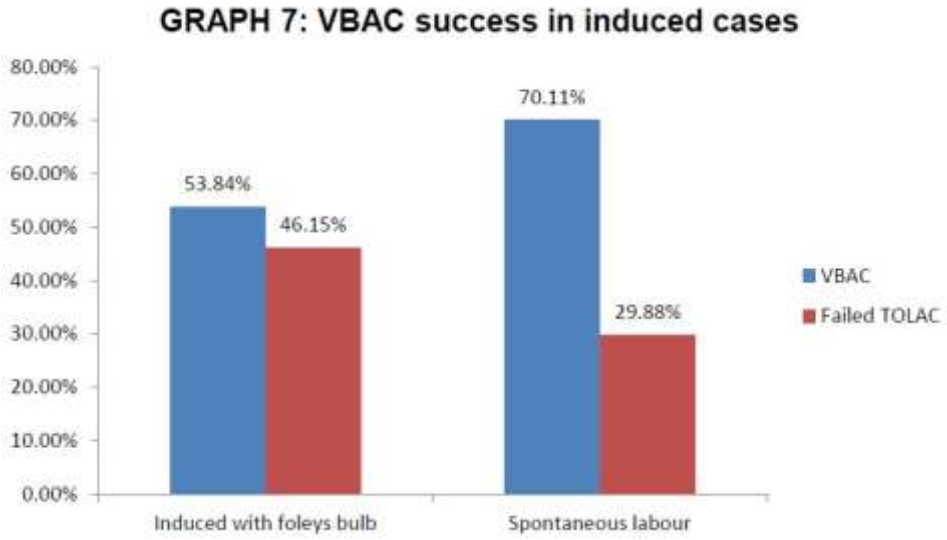


TABLE 6 : VBAC SUCCESS IN INDUCED CASES :

	VBAC	Failed TOLAC
Induced with Foleys bulb (n=13)	7(53.84%)	6(46.15%)
Spontaneous labour (n=87)	61 (70.11%)	26 (29.88%)



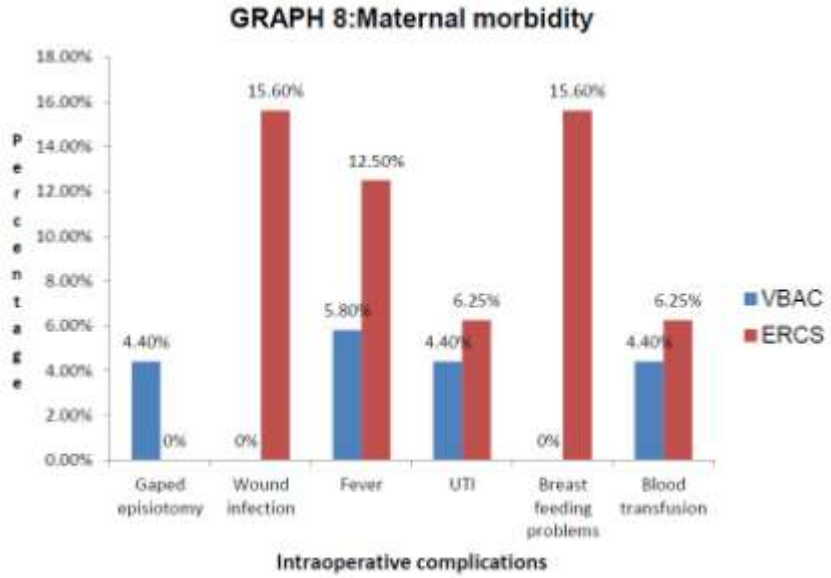
MATERNAL OUTCOME :

1. **Intraoperative complications**: In 32 cases delivered by repeat LSCS 7(21.8%) had adhesions , 3 (9.3%) has scar dehiscence and MSL each. No intraoperative complications in 17 (53.12%) cases.

TABLE 7: INTRAOPERATIVE COMPLICATIONS (N = 32)

COMPLICATIONS	NO. OF CASES	PERCENTAGE (%)
Adhesions	7	21.8
Scar Dehiscence	3	9.3
Meconium stained liquor	3	9.3
Rupture Uterus	0	0
Hematoma	2	6.2
Bladder Injury	0	0
No complications	17	53.12

2. **Maternal morbidity :** Hospital stay, fever, wound infection, breast feeding problems, UTI are higher in Emergency repeat caesarean group compared to VBAC cases.



3. **Maternal mortality:** No maternal deaths in VBAC and Emergency repeat caesarean section cases.

NEONATAL OUTCOME :

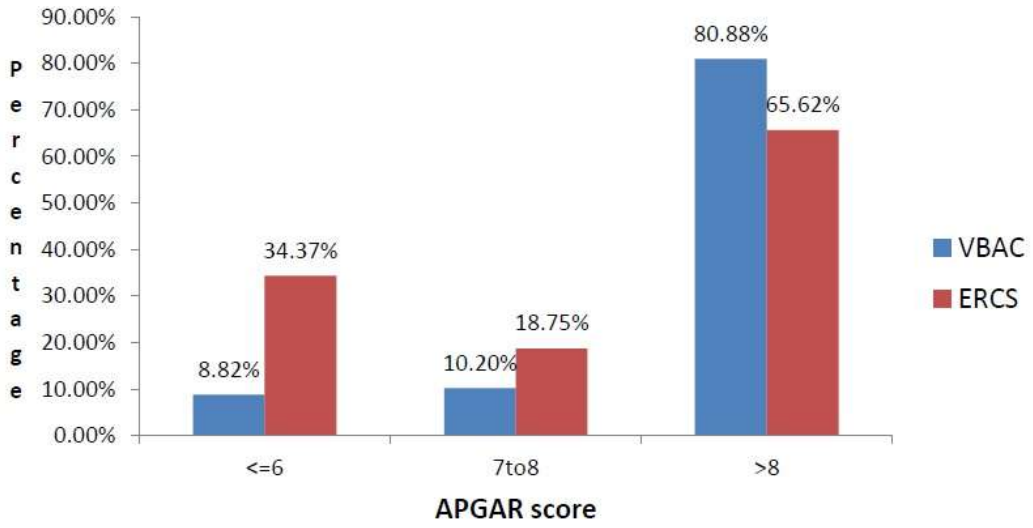
1. Apgar score :

Babies born by VBAC who had Apgar <=6 were 6 (8.82 %) and Emergency repeat caesarean section were 11 (34.37%) and Apgar >8 were 55(80.88%) in VBAC and 21 (65.62%) in Emergency repeat caesarean section. Babies with low APGAR are higher in Failed TOLAC group compared to VBAC group.

TABLE 8: APGAR SCORE

Apgar	VBAC (n=68)	Emergency repeat caesarean section (n=32)
≤ 6	6 (8.82 %)	11 (34.37%)
7-8	7 (10.2%)	6 (18.75%)
>8	55(80.88%)	21 (65.62%)

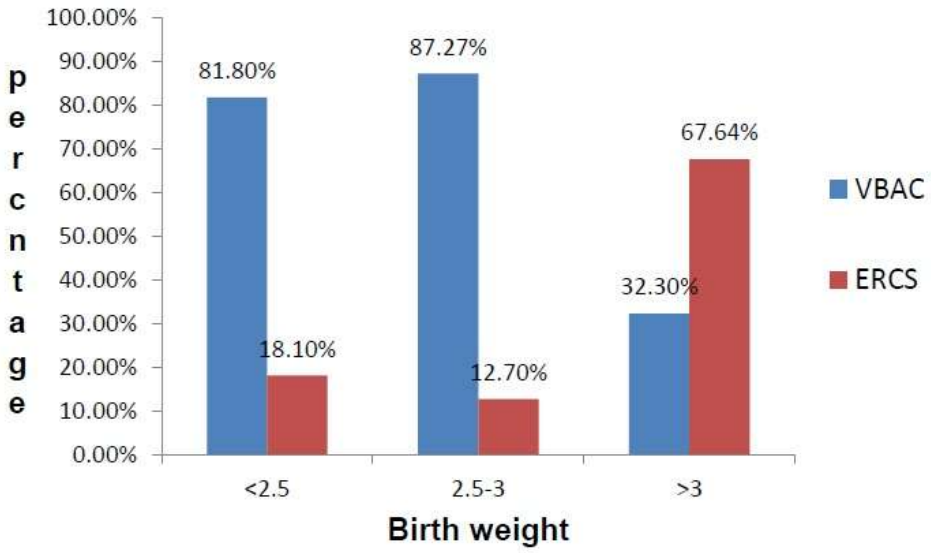
GRAPH 9: APGAR SCORE



2. Birth weight of the baby :

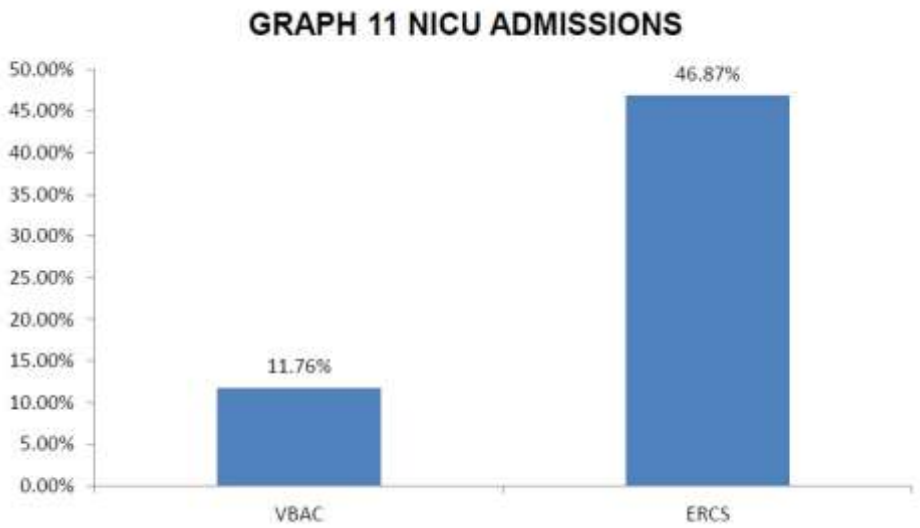
There were 48(87.27%) out of 55 babies in VBAC group, who weighed 2.5-3 kg, while > 3kg babies were 23 (67.64%) out of 34 in the ERCS group. Higher VBAC success rate in birth weight less than 3kg.

Graph 10: Birth weight of the baby



3. NICU ADMISSIONS :

15 (46.87%) babies had NICU admission in Failed TOLAC group (n=32) and 8 (11.76%) in VBAC group. NICU admissions are higher in Failed TOLAC compared to VBAC group.

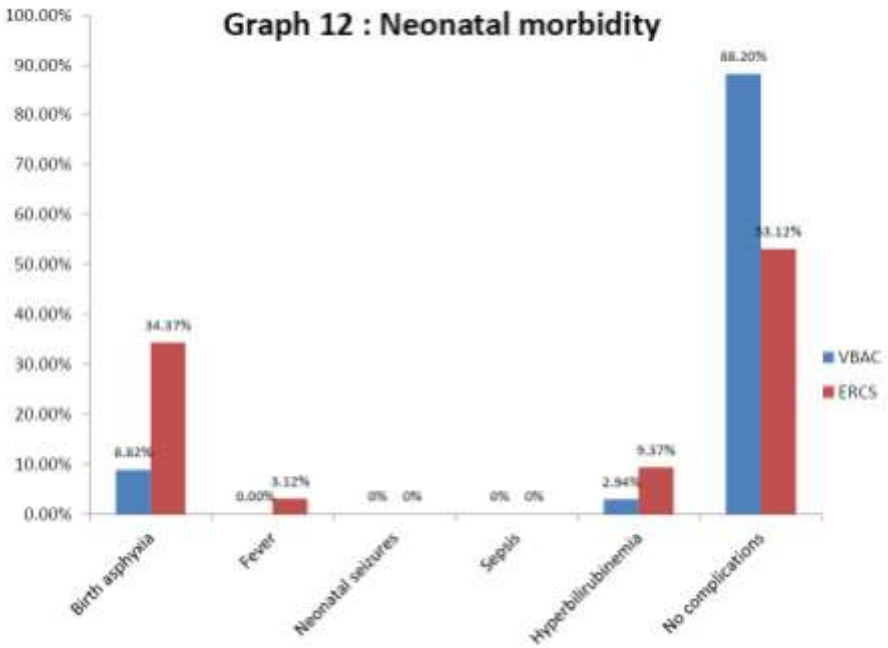


4. NEONATAL MORBIDITY :

Neonatal complications such as birth asphyxia, hyperbilirubinemia , fever are higher in repeat LSCS group compared to VBAC group. Birth asphyxia seen in 6 (8.82%) cases in VBAC group and 11 (34.37%) in repeat LSCS group. Hyperbilirubinemia in 2 (2.94%)and 3 (9.37%) cases in VBAC and repeat LSCS respectively. Fever in 1 (3.12%) case in repeat LSCS group.

TABLE 9: NEONATAL MORBIDITY

Complications	**VBAC (n=68)**	**Emergency repeat caesarean section(ERCS) (n=32)**
Birth asphyxia	6 (8.82%)	11 (34.37%)
Fever	0	1 (3.12%)
Neonatal seizures	0	0
Sepsis	0	0
Hyperbilirubinemia	2 (2.94%)	3 (9.37%)
No complications	60 (88.2%)	17 (53.12%)



5. NEONATAL MORTALITY :

No neonatal deaths in VBAC and Emergency caesarean section cases in our study.

6. NEONATAL OUTCOME :

All babies were live born. No still births and neonatal deaths seen in VBAC and Repeat LSCS group.

TABLE 10 : NEONATAL OUTCOME

Neonatal outcome	VBAC (n=68)	Emergency repeat caesarean section(ERCS) (n=32)
Live birth	68	32
Still birth	0	0

IV. Discussion

There is widespread public and professional concern about the increasing proportion of caesarean births worldwide[7]. Increasing rates of primary caesarean section has led to an increased proportion of obstetric population with history of prior caesarean delivery. There are numerous studies done in India and other countries which suggest that, for carefully selected women with one previous caesarean section, a trial for vaginal delivery with close maternal and fetal monitoring is safe with a success rate of 60% - 80%[8].

Majority of the patients in the study group i.e. 62 (62%) were in the age group of 21-25 years and 31(31%) in 26-30 years, reflecting the child bearing age of most of the women. Among women who delivered vaginally, 4 women were in 31-35 years age group and none was > 35 years, while among women who delivered by repeat caesarean section, none were in 30-35 years age group and > 35 years. Although it is statistically not significant, our study demonstrated that women who are older than 30 had higher VBAC success than those who are younger than 30. This is most probably due to higher parity in this age group in our population.

In contrast, the previous studies demonstrated a direct linear relationship between maternal age and VBAC failure. Specifically, Jolly et al. (2000)**[9]** found that women >35 years old were more likely to have caesarean deliveries. This could have been due to an age-related changing nature of patient preferences or the counseling clinician dissuading older patients from VBAC because they were perceived to be suboptimal candidates.

In a study by Knight, younger women had a higher success rate with vaginal delivery[10]. Raja et al, reported that the increasing maternal age directly correlated with the risk of emergency CS[11]. Doshi et al, reported that the success of VBAC declined significantly as the maternal age increased beyond 35 years[12].

Among 100 patients who were given trial of labour, 68 (68%) patients had successful vaginal delivery. Among these 68 patients with vaginal delivery, 49 (49%) patients had spontaneous vaginal delivery. 19 (19%) patients had assisted vaginal delivery with vacuum and outlet forceps. Majority of patients in the assisted vaginal delivery group 10 (52.6%) were delivered with vacuum. In 9 (47.36%) patients, outlet forceps was applied due to fetal distress and poor maternal efforts.

68 (68%) patients had successful vaginal delivery in the study group which was comparable with other studies.

TABLE 11 : COMPARISON OF MODE OF DELIVERY

Mode of delivery	Study Group	Anagha et al[24]	Shakun Singh et al[14]
VBAC	68%	46.70%	61%
Repeat LSCS	32%	53.30%	39%

Remaining 32 (32%) patients had repeat caesarean section. The commonest indications for the repeat caesarean section were fetal distress 17 (53.1%) and doubtful scar integrity 8 (25%) and failure to progress in 7 (21.8%) patients. 8 (25%) patients had impending symptoms of rupture uterus and 6 (18.7%)were found to have scar dehiscence and no cases of uterine rupture intraoperatively. In a study by Latika et al, fetal distress was the most common (36.3%) indication of repeat caesarean section followed by scar tenderness (27.2%)[13].

Incidence of uterine rupture was 0% in the study group and 1% in Shakun Singh et al[14] study. Scar dehiscence was noted in 6 (18.7%) of cases in study group.

Studies had shown that success rates vary based on the patient's obstetric history and the indication for the previous CS. Several studies have identified the likelihood of VBAC success in the presence of a prior vaginal delivery (Hendler et al. 2004;Chauhan et al. 2003)**[15,** 16]. Previous vaginal birth was considered the single best predictor for successful VBAC, with a success rate of 85 – 93%, as reported in the literature (Hendler et al. 2004)[15]. In addition, the safety in attempting VBAC is greatest in those who had a previous successful VBAC (Elkousy et al. 2003)[17]. Thus, the available data would suggest that women with a prior vaginal delivery should be encouraged to attempt VBAC. Our study also demonstrated that a previous VBAC is strongly associated with

a high success rate of VBAC, reaching up to 80%, which is similar to that reported in the literature (Hendler et al.2004)[15].

High VBAC success was noted in those women with nonrecurrent indications for the previous caesarean delivery, VBAC is less successful if the prior indication was failure to progress (FTP) and cephalopelvic disproportion (CPD) (Peacman et al. 2005)[18]. Earlier investigations have shown improved VBAC success in women with a previous caesarean delivery for non-recurrent indications such as malpresentation or fetal distress (65.5% and 52.2%), respectively, compared with a caesarean delivery for recurrent indications (48.6%). In study by Doshi et al, patients with prior LSCS for malpresentations had the highest rate of successful VBAC, followed by those with prior LSCS for fetal distress and patients with prior LSCS for non-progress of labor (Dystocia)[12]. In our study VBAC Success was 53.3% in failure to progress and 70.58% in other recurrent indications. These results indicate that any previous diagnosis of FTP/ CPD should not automatically exclude the patient from the trial of labour.

In this study, inter-delivery interval was not significantly associated with VBAC success .

In present study, women who were in active phase of labor had better chances of vaginal delivery. 68 (86%) out of 79 cases in active phase of labour delivered by VBAC. Similar finding was reported in studies by Bangal et al. and by Birara[19, 20].

Although the safety of vaginal birth after a previous caesarean section had been established in many studies, there is increasing evidence that a failed attempt at VBAC is associated with increased risk of uterine rupture/dehiscence (Landon et al. 2005)[21]. Furthermore, these patients are at greater risk for uterine rupture compared with those with elective repeat caesarean section without labour (Peaceman et al. 2005)[18]. In our study, there was no reported uterine rupture no neonatal mortality.

Intraoperatively, 22% of cases had adhesions in study group which was comparable to 26.92% in Shakun Singh et al[14] study.

The maternal morbidity in terms of pyrexia, wound infection, UTI were found to be higher in caesarean group compared to vaginal delivery group which was statistically significant.

In present study, VBAC rate was 48 (87.27%) out of 55 when birth weight was between 2.5-3 kg, while vaginal delivery occurred in only 11 (32.3%) out of 34 women when birth weight was > 3 kg. Birth weight more than 3 kg increases the chances of Caesarean section (67.64%). In a study by Doshi et al, the success rate of VBAC was significantly higher in women who had infants weighing < 3 kg[12]. Estimated fetal weight should be included in the decision-making process for all women contemplating a trial of labor after cesarean delivery.

In present study, admission rate to neonatal intensive care unit was less in successful VBAC than emergency caesarean section group. 15 (46.87%) neonates in failed trial of labour group needed neonatal resuscitation whereas only 8 (11.76%) neonates needed resuscitation in VBAC group. The group of failed VBAC showed lower Apgar scores compared with the group of successful VBAC.

In present study, there were no perinatal deaths. Crowther CA et al, reported that the risk of fetal death or live born infant death prior to discharge or serious infant outcome was significantly lower for infants born in the planned Elective repeat Caesarean group compared with infants in the planned VBAC group (0.9% versus 2.4%)[22]. Andrea B Pembe reported high proportion of perinatal deaths as compared to present study[23].

V. Conclusions

Management of patients with previous caesarean section has gained immense importance in present era due to increase in the proportion of patients with previous caesarean section.

- It is necessary for health care personnel to provide proper antenatal counseling regarding need for institutional delivery and option of VBAC, benefits and risks (intrapartum emergencies like scar dehiscence, uterine rupture) involved to be explained.
- Correct analysis of prior indication for caesarean section helps to classify the patients for elective caesarean delivery or trial of vaginal birth after caesarean.
- A well-defined management protocol for patients selected for trial of labour should be instituted.
- Encouraging trial of labour after caesarean section helps to reduce the complications associated with anesthesia, surgery and postoperative complications. It also reduces the hospital stay.
- In patients selected for trial of labour, close fetal and maternal surveillance is advised for early detection of complications.
- Delivery of patients with previous caesarean section should be done in a well-equipped hospital, where facilities for immediate intervention are available if necessity arises so as to reduce / prevent maternal and perinatal morbidity and mortality.
- In Selected women, a properly conducted trial of labour after 1 previous caesarean section constitutes best and safest form of obstetric management.

VI. Summary

The clinical study of "A STUDY OF VAGINAL BIRTH AFTER PREVIOUS CAESAREAN SECTION IN A TERTIARY CARE CENTRE" was conducted at Department of OBG, Gandhi Medical College, Secunderabad, Telangana from November 2018 to May 2020.

- In this study comprising of 100 patients with one previous caesarean section, majority of patients (62%) belonged to age group of 21-25 years. 98 (98%) patients were between 37 to 40 weeks of gestation.
- 100 Patients who were allowed for trial of labour were monitored carefully for feto-maternal wellbeing and signs and symptoms of uterine rupture.
- In the study, 68% of patients delivered vaginally. This is comparable to other studies.
- Repeat LSCS was done in 32 (32%) patients in trial group. The most common indication of repeat caesarean section during trial of labour was fetal distress (53.1%).
- Scar dehiscence was noted in 9.3% of patients and uterine scar rupture in 0% of patients.
- 4 (80%) out of 5 Patients with history of VBAC in previous pregnancy delivered by VBAC. 6 (85.71%) out of 7 patients with history of normal vaginal delivery before caesarean section delivered by VBAC. In 88 patients with no history of vaginal delivery 58 (65.9%) delivered by VBAC.
- Maternal morbidity was significantly low in vaginal deliveries compared to caesarean deliveries which were statistically significant. There are no maternal deaths in our study.
- Babies born by VBAC who had Apgar <=6 were 6 (8.82 %) and Emergency repeat caesarean section were 11 (34.37%) and Apgar >8 were 55(80.88%) in VBAC and 21 (65.62%)in Emergency repeat caesarean section.
- There were 48(87.27%) out of 55 babies in VBAC group, who weighed 2.5-3 kg, while > 3kg babies were 23 (67.64%) out of 34 in the ERCS group. Higher VBAC success rate in birth weight less than 3kg .
- 15 neonates had NICU admission in failed trial of labour group, 8 neonates in VBAC group.
- Birth asphyxia seen in 6 (8.82%) cases in VBAC group and 11 (34.37%) in repeat LSCS group. Hyperbilirubinemia in 2 (2.94%)and 3 (9.37%) cases in VBAC and repeat LSCS respectively. Fever in 1 (3.12%) case in repeat LSCS group.
- There are no still births and neonatal deaths in both VBAC and Failed TOLAC cases.

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