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Maternal and fetal outcome in placenta accreta associated with placenta previa.

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Abstract

Background: Placenta accreta the placenta forms at the site of disruption between the endometrium and myometrium. Placenta accreta is an iatrogenic condition, in which there is abnormal invasion of placental trophoblast in the uterine myometrium. It is common among women with history of previous cesarean section. It is a major risk factor for postpartum hemorrhage and can lead to morbidity and mortality of the mother and neonate. The main objective of this study was to determine the associated risk factors, maternal and perinatal outcome in the cases of placenta accreta.

Material and Methods: This retrospective study was carried out for a period of one-year w.e.f01.01.2022 to 31.12.2022 at Government Medical College, Srinagar after ethical clearance from Institutional Ethical Committee. The incidence, maternal and perinatal outcome in cases of placenta accreta managed in 01-year duration was analyzed. Data obtained was categorized according to the tables. Results were analyzed and tabulated in the form of numbers and percentage.

Results: During the study period of 01 year, 29 patients having singleton deliveries with placenta accreta were analyzed. It was found that the mean age of the participants was 31±2.37 years with mean gestational age 35±2.13 weeks. Majority of the participants (75.86%) had Anterior topography of placenta accreta. Further, C. Hysterectomy with preservation of ovaries with bladder repair/ L internal iliac artery ligation was performed on 51.72% study participants. In neonatal outcome it was found that majority of the neonates were in good condition and 44.82% required NICU admission.

Conclusion: The present studyconcluded that placenta accreta is common in multiparous women in third decade of life, women with previous placenta previa and

uterine surgery which is commonly detected during antenatal screening.

Keywords: Placenta accreta, Pregnancy, Maternal outcome, Perinatal outcome &Placenta previa.

Introduction

Placenta forms the most important link between the developing fetus and the mother. In normal pregnancy, blastocyst is implanted into the endometrium which detaches from uterus. In placenta accreta the placenta forms at the site of disruption between the endometrium and myometrium. Placenta accreta is an iatrogenic condition, in which there is abnormal invasion of placental trophoblast in the uterine myometrium. It is common among women with history of previous cesarean section [1]. It is a major risk factor for postpartum hemorrhage and can lead to morbidity and mortality of the mother and neonate [2].

It is estimated that the incidence of placenta accreta is increasing now these days. In a study it was reported that the risk factors of placenta accreta in patients with placenta previa and previous cesarean section was 3%, 11%, 40%, 61%, and 67% for the first, second, third, fourth, and fifth or more cesareans, respectively [3].

The accurate antenatal screening of placental accreta helps in improving maternal and fetal outcomes [4,5]. It is observed that there is 95% accuracy of antenatal diagnostic test in diagnosing the placental accreta [6,7].

Accordingly, the main objective of this study was to retrospectively determine the maternal and fetal outcome in placenta accreta associated with placenta previa admitted in the institute during 01 year of study period.

Material and Methods

This retrospective study was carried out for a period of one-year w.e.f01.01.2022 to 31.12.2022 at Government Medical College, Srinagar after ethical clearance from Institutional Ethical Committee. In this study, incidence, maternal and perinatal outcome in cases of placenta previa managed in 01-year duration was analyzed. All patients diagnosed to placentaaccreta with placentaprevia and admitted in the department of obstetrics were enrolled for this study based on following selection criteria.

Inclusion criteria

Pregnant women with history of painless bleeding per vagina after 28 weeks of gestation, ultrasonographically confirmed cases of placenta accreta were selected as inclusion criteria.

Exclusion criteria

Multiple pregnancies, Abruption placenta, bleeding below 28 weeks of gestation were excluded from the study.

Based on selection criteria 29 singleton deliveries with placenta accreta that took place in the department of obstetrics during the study period were enrolled and their medical records were considered for analysis.

All patients were managed according to the obstetric protocol of the department. Obstetric history including the parity, previous mode of delivery and previous history of placenta previa was taken into account. Neonatal account like maturity and NICU admission were also taken into account. Ultrasound done confirmed the diagnosis of placenta accreta. Data obtained was categorized according to the tables. Results were analyzed and tabulated in the form of numbers and percentage.

Statistical analysis

Data was recorded in excel sheet and statistical Analysis was done with software SPSS-22 version. Data was calculated as percentage and proportions.

Results

During the study period of 01 year, 29 patients having singleton deliveries with placenta accreta that took place in the department of obstetrics were enrolled and their medical records were analyzed.

Table 1: Age Distribution

Age (In years)	Number	Percentage
25-30	14	48.27%
31-35	15	51.72%

Table 1 depicts the age distribution of study participants. In our study majority of the participants (52%) were in the age group of 31-35 years. The mean age of the participants was 31±2.37 years.

Table 2: Gestational Age

Gestational Age (In weeks)	Number	Percentage
28-32	03	10.34%
33-36	22	75.86%
≥ 37	04	13.79%

Table 2 depicts that majority of the participants (75.86%) had gestational age between 33-36 weeks. The mean gestational age was 35±2.13 weeks.

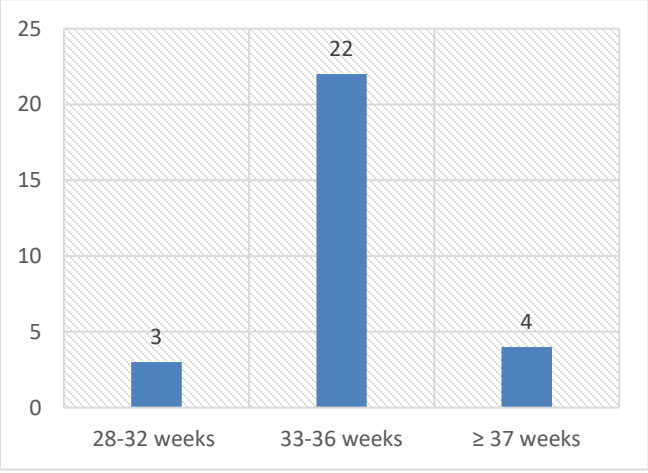

Fig.1: Gestational Age (in weeks)

Table 3: Previous LSCS

Previous LSCS	Number (n)	Percentage (%)
1	8	27.58%
2	17	58.62%
3	4	13.79%

In our study 02 prior LSCS was observed in 58.62% study participants followed by 01 prior LSCS in 27.58% participants.

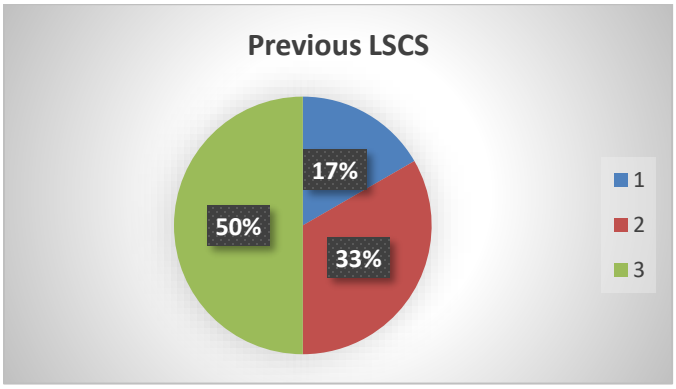

Fig. 2: Previous LSCS

Table 4: Placenta Previa Topography

Placenta Previa Topography	Number (n)	Percentage (%)
Anterior	22	75.86%
Posterior	07	24.14%

Table 4 depicts that majority of the participants (75.86%) had Anterior topography of placenta previa followed by posterior topography in 24.14% participants.

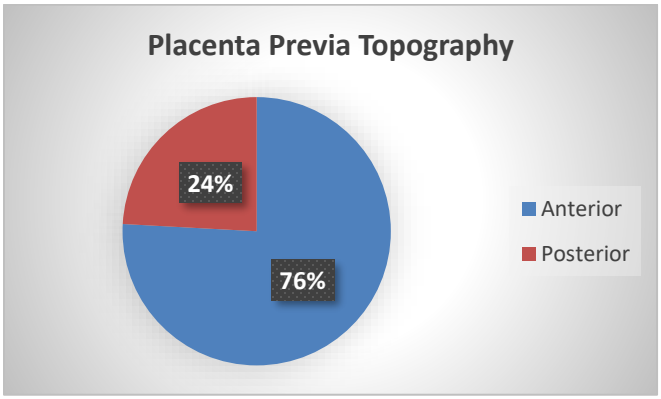

Fig. 3: Placenta Previa Topography

Table 5: Diagnosis of Placenta accreta

Diagnosis	Number (n)	Percentage (%)
USG	25	86.20%
MRI	02	6.89%
Intra-op	02	6.89%

In our study 86% study participants diagnosed placenta accreta through USG.

Table 6: Maternal Outcome

Maternal Outcome	Number	Percentage
C. Hysterectomy with preservation of ovaries with bladder repair/ L internal iliac artery ligation	15	51.72%
C. Hysterectomy with removal of bilateral tubes and ovaries	1	3.44%
Classical caesarean with uterus preservation	1	3.44%
LSCS with uterus preservation	1	3.44%
LSCS with focal resection of accreta	1	3.44%
subtotal hysterectomy with preservation of ovaries/ bladder repair	10	34.48%

In our study, C. Hysterectomy with preservation of ovaries with bladder repair/ L internal iliac artery ligation was performed on 51.72% study participants followed by subtotal hysterectomy with preservation of ovaries/ bladder repair performed on 34.48% study participants.

Table 7: Blood Loss

Blood Loss	Number (n)	Percentage
500-1000 ml	2	6.89%
1000-1500 ml	18	62.06%
1500-2000 ml	7	24.13%
2000-2500 ml	2	6.89%

Table 7 depicts the blood loss among study participants. It was found that 62.06% participants had blood loss between 1000-1500 ml whereas 24.13% participants had blood loss between 1500-2000 ml.

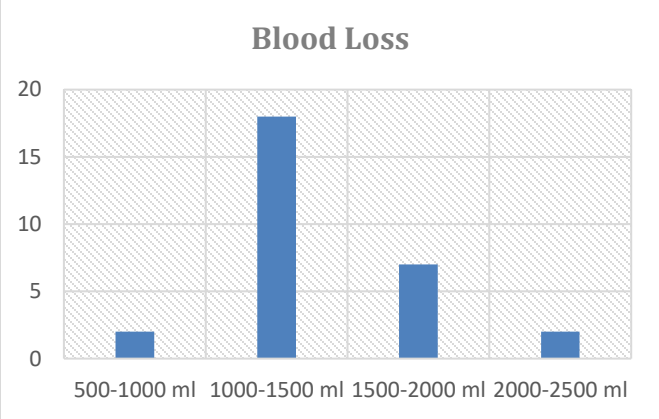

Fig.4: Blood loss

Table 8: Complications reported

Complications	Number (n)	Percentage
None	26	89.65%
Bladder Injury	03	10.34%

Table 8 depicts that 89.65% participants haven't reported any complication where as 10.34% participants reported bladder injury.

Neonatal Outcomes

Table 9: APGAR Score

APGAR Score	Number (n)	Percentage
0-3	2	6.89%
4-6	11	37.94%
7-10	16	55.16%

It was found in our study that 55.16% neonates were in very good condition having APGAR Score between 7-10 followed by 37.94% were moderately depressed and 6.89% neonates were found to be severely depressed.

Table 10: Birth weight

Birth Weight	Number (n)	Percentage
1 kg – 2 kg	12	41.37%
2 kg – 3 kg	17	58.62%
2175.86±467.25 grams		

In our study most of the neonates (58.12%) have birth weight between 2kg-3kg whereas 41.37% neonates have birth weight between 1kg-2kg. The mean birth weight was 2175.86±467.25 grams.

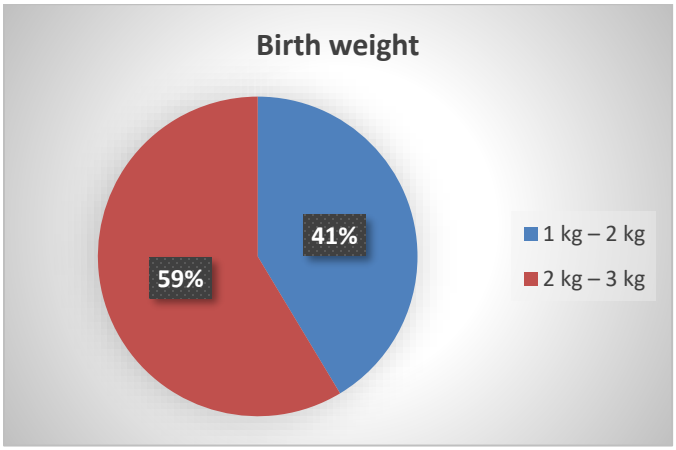

Fig. 5: Birth weight

Table 11: NICU Admission

NICU Admission	Number	Percentage
No	16	55.17 %
Yes	13	44.82%

In our study it was found that 44.82% neonates require NICU admission

Discussion

The placenta normally migrates away from the cervical opening as the pregnancy progresses, so women in the earlier stages of pregnancies, are more likely to have placenta accreta / previa than woman at term [8].

In this retrospective study for a period of 01 year, 29 patients having singleton deliveries with placenta accreta were included in the study.

In our study majority of the participants (52%) were in the age group of 31-35 years. The mean age of the participants was 31±2.37 years. The results are in accordance with the study conducted by KothapalliDetal.[9] and Elizabeth et al [10] wherein the mean age of the patients was 28.65±5.24 and 29.07± 6.12 years respectively.

The majority of the participants (75.86%) had gestational age between 33-36 weeks. The mean gestational age was 35±2.13 years. The results are in association with the study conducted by KM Aditi et al. [11] andDashe et al. [12].

In our study 02 prior LSCS was observed in 58.62% study participants followed by 01 prior LSCS in 27.58% participants. The majority of the participants (75.86%) had Anterior topography of placenta previa followed by posterior topography in 24.14% participants. The results are in accordance with the study conducted by KothapalliDetal.[9].

In our study 86% study participants diagnosed placenta previa through USG. In our study, C. Hysterectomy with preservation of ovaries with bladder repair/ L internal iliac artery ligation was performed on 51.72% study participants followed by subtotal hysterectomy with preservation of ovaries/ bladder repair performed on 34.48% study participants. The results are in accordance with the study conducted by Varlas VN et al. [13].

It was found that 62.06% participants had blood loss between 1000-1500 ml whereas 24.13% participants had blood loss between 1500-2000 ml. In our study 89.65% participants haven't reported any complication where as 10.34% participants reported bladder injury. The study

conducted by Varlas VN et al. [13] supports the findings of our study.

It was found in our study that 55.16% neonates were in very good condition having APGAR Score between 7-10. Most of the neonates (58.12%) have birth weight between 2kg-3kg. The mean birth weight was 2175.86±467.25 grams and 44.82% neonates require NICU admission. Study by Sarojini et al. [14] showed that 30.4% of babies required NICU admission which is similar to our study. The findingsare supported by the work of Crane et al. [15].

Conclusion

From our study it is concluded that placenta accreta is common in multiparous women in third decade of life, women with previous placenta previa and uterine surgerywhich is commonly detected during antenatal screening.Early diagnoses and pre plan mode of delivery prevent the risk of low birth weight and low APGAR score in infants and also promotes the maternal outcomes. Thus, there is need for timely referral of placenta accreta case to a tertiary care obstetrics Centre with availability of blood bank and NICU.

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