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Original Research Article

Obstetric factors and pregnancy outcome in placenta previa

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Abstract

Background: Placenta previa is one of the major causes for maternal morbidity and mortality.

Its prevalence is 5-5%. The aim of this study was to analyze obstetric factors and the pregnancy outcome in Placenta Previa.

Study Design: One year prospective study.

Results: Out of total 6693 deliveries there were 78 cases of Placenta Previa i.e 1.16% cases, which were further categorized into Type 1, 2, 3 and 4 according to location of placenta. Out of total 78 cases three were twins and total neonatal count was 81. Out of 78 cases 73 underwent LSCS while rest five delivered normally as they were Types 1 PP i.e low lying placenta who presented to labour room in active state of labour. Majority of Neonates i.e 72.8% were low birth weight. 7 Neonates expired in NICU while 6 had IUD's.

Conclusions: 73 Caesarean sections were done for patients having placenta previa, which is for 1.09% of the total deliveries. 41% had total placenta previa. There were 32% cases of PPH out of which one patient developed shock but was resuscitated and stabilized. 62% patients required blood transfusion. 64% of the babies were preterm and 72.8% were low birth weight babies.

Keywords: Obstetric factors, pregnancy outcome, placenta previa

Introduction

Placenta previa exists when the placenta is inserted wholly or in part into the lower segment of the uterus [1]. It is one of the major cause for antepartum hemorrhage, which complicates two to five percent of the pregnancies [2]. The incidence of placenta previa is approximately 4-5 per 1000 deliveries [3,4].

Historically, placenta previa is divided into four type

Type 1: Low lying placenta -where the lower placental edge is in the lower segment, but does not reach the internal os (37.0-54.9%)

Type 2: Marginal previa- where the lower placental edge reaches the internal os.

Type 3: Incomplete placenta previa – where the placental edge overlaps the internal os, but the placental attachment is asymmetric across the internal os (26.6-44.0%)

Type 4: Complete placenta previa- where placental edge symmetrically overlaps the internal os (23.0-31.3%)

The use of transvaginal ultrasonography is resulting in a much lower incidence of placenta previa because transabdominal USG is associated with high false positive rate [5].

There are several factors, especially obstetrical, which has been found to be associated with placenta previa. Advancing maternal age, multiparity, previous cesarean delivery, previous abortions etc has been associated with increased risk of placenta previa. The adverse maternal outcome like postpartum hemorrhage, cesarean hysterectomy, increased need for blood transfusion are dreaded complications [4, 6]. Higher risk of preterm birth, low APGAR score, congenital malformation increases the perinatal morbidity and mortality [3,6].

The objective of this study was to analyze the obstetrical factors associated with placenta previa and to find out its maternal and perinatal outcome.

Methods

This was a retrospective study was conducted in the Department of Obstetrics and Gynaecology, Kamla Nehru State Hospital for Mother and Child, Indira Gandhi Medical College Shimla, Himachal Pradesh 171001, India for one year from July 1, 2016 to June 30, 2017. All the cases with placenta previa were studied for their Detail information regarding patient’s management and other relevant clinical findings were noted.

Results

Out of total 6693 deliveries there were 78 cases of Placenta Previa i.e 1.16% cases which were further categorized into Type 1, 2, 3 and 4 according to location of placenta. Out of total 78 cases three were twins and total neonatal count was 81. Out of 78 cases 73 underwent LSCS while rest five delivered normally

as they were Types 1 PP ie low lying placenta who presented to labour room in active state of labour. Majority of Neonates ie 72.8% were low birth weight. 7 Neonates expired in NICU while 6 had IUD’s.

Table 1: Types of placenta previa

Low Lying	9(11.5%)
Marginal	18(23.0%)
Partial	19 (24.3%)
Complete	32 (41%)

Table 1 shows the type of placenta previa. Major placenta previa (total and partial) constituted 51% of the all placenta previa cases. Of these 41% had total placenta previa.

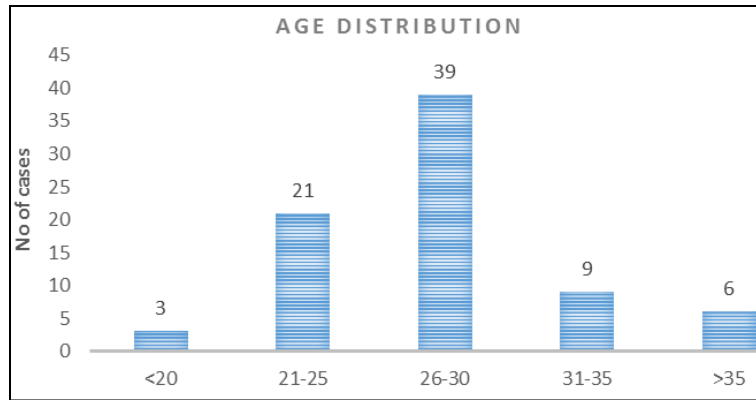


Fig 1: Age distribution of the patient.

This table depicts that 50% of the patients having placenta previa were of 26-30 years of age followed by 21-25 years.

Table 3: Obstetric profile of a woman

Obstetric Profile	N (%)
Parity	
Primipara	15 (19%)
Multipara	63(81%)
Abortions	15(19.2%)
Abortions and D&C	9(11.5%)
Prev LSCS	20(25.6%)
Malpresentations	5(6.4%)

Majority patients of placenta previa were multigravida. Previous LSCS was seen in 25.6% of patients followed by patients with history of Abortions and D&C.

Table 3: Neonatal Outcome.

Factors	N %
Maturity (weeks) 28-30w	11 (14%)
31-33w	26 (33%)
34-37w	33 (42.3%)
>37w	8 (10.2%)
Birth weight (Kg)	<1 -- 1
	1-1.5 -- 12
	1.6-2 -- 21
	2.1-2.5 -- 25
	2.6-3 -- 3
	>3 -- 0
Preterm Births	52(64%)
Low birth weight babies	59(72.8%)
APGAR less than 7	22(27%)
Early neonatal deaths	7(8.6%)
IUD	6 (7.4%)

This table represents that most women were at gestational age of 34-37 weeks. 72.8% of Neonates had low birth weights and 27% had APGAR less than 7 at 5mins. Total perinatal death count was 13.

Table 4: Obstetrical complications.

Complications	N %
Postpartum Haemorrhage	25 (32%)
Anemia	35 (44.8%)
Shock and Anemia	2(2.5%)
Blood Transfusion	48 (61%)

61% of women had blood transfusion. 32% patients had PPH while 2 patients developed shock but recovered with the emergency management of resuscitation.

Discussion

Placenta previa is the commonest cause of APH and is considered to be the most dreaded complication of Obstetrics due to its adverse maternal and perinatal outcome.

In our study, the incidence of placenta previa was 1.16% while cases undergoing cesarean section was found to be 1.09% of total deliveries. Varies studies have shown the incidence to be 3-1% [2, 6] which is consistent with our study.

Of the total 93.5% cases with placenta previa underwent LSCS this was consistent with the study conducted by Kalam F [7] with similar results.

Increasing age and number of pregnancies have been shown to be an important risk factor for placenta previa. This study had one fifth of patient above 30 years of age and 81% of total cases were multipara. According to Cleary *et al*, a prospective database from multicenter investigations of 36,056 women with singletons showed increasing age was significantly associated with placenta previa comparing women less than 35 years to 29-35 years and 40 years and older [8]. Multiple studies Babinszki A *et al*, Parazzini F *et al*. and Gilliam M *et al*. have shown increasing parity to be an important risk factor for placenta previa [9, 10, 11]. Which is also consistent with our study showing 81% multipara cases having placenta previa. As per study conducted by Gurol-Urganchi I *et al*. caesarean section at first birth remained associated with increased risk of placenta previa as seen in our study with 25% cases [16, 17]. Previous history of ab have been significantly associated with up to three times risk of placenta previa. Sheiner E, Ananth CV, Johnson LG, Hung TH [2, 4, 17, 18]. There was no maternal mortality during this study period.

In our study 64% neonates were preterm which was consistent with studies conducted by Silver *et al* and Cotton *et al* 70% and 77.5% [12, 13].

72.8% of neonates had low birth weight and 16% had perinatal death. Increased perinatal mortality as well as neonatal death has been noted in other studies conducted by Crane JM *et al* and Ananth CV *et al* [14, 15].

Conclusion

There were 73 cases of cesarean sections done for placenta previa, which is for 1.09% of the total deliveries. 41% had total placenta previa. There were 32% cases of PPH out of which one patient developed shock but was revived. 62% patients required blood transfusion. 64% of the babies were preterm and 72.8% were low birth weight babies. Caesarean section for placenta praevia should involve the most senior available staff in the anaesthetic and obstetric service. At least 4 units of blood should be cross matched.

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