Original Article

Incidence of Placenta Previa and Maternal Outcome in Patients with Major Degree Placenta Previa

Placenta Previa and Maternal Outcome

Afroze Ashraf[1] and Sumaira Fatima Sabir[2]

ABSTRACT

Objective: To conduct this study to find the occurrence in females belonged to local population.
Study Design: Observational / cross sectional study
Place and Duration of Study: This study was conducted at the Department of Obstet and Gynae, Lady Willingdon Hospital, Lahore from March 2017 to November 2017.
Materials and Methods: This study was conducted on 4658 pregnant females. Gravid females with vaginal bleeding after 28 weeks gestation underwent ultrasonography to assess placenta previa. Findings of placenta previa were noted and females were followed-up till delivery of fetus and placenta and complications including obstetrical hysterectomy, anemia, DIC, multi-organ failure, blood transfusion and maternal death.
Results: Mean age patients were 33.20±5.03 years and mean gestational age was 35.38±3.00 weeks. Out of the 4658 females, 2402 (51.6%) underwent spontaneous vaginal delivery and 2256 (48.4%) underwent cesarean section. In females who underwent cesarean section, 105 (4.7%) had placenta previa. Among them, 19 had obstetrical hysterectomy, 2 had DIC, 1 had multi-organ failure and 1 died, and 99 patients had blood transfusion.
Conclusion: Thus in a tertiary care hospital the frequency of placenta previa was low in females presenting for delivery. But the complications are high in females with placenta previa and hysterectomy is one of the major complications of pregnancy with placenta previa.

Key Words: Placenta previa, cesarean section, obstetrical hysterectomy, maternal death. MAP (morbidly adherent placenta)

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INTRODUCTION

Placenta previa makes pregnancy high risk due to placental attachment to the lower part of the uterus. The placenta is termed as major degree if whole of it is in the lower part and minor degree if a portion of it covers the lower part. At term the Incidence stands at 0.4 percent.[1] The presentation is usually as warning haemorrhage in which there is vaginal bleeding without any pain, around 28 to 30 weeks when the lower segment stretches. Ultrasound is the diagnostic modality and diagnosed mostly on the anomaly scan, but sometimes diagnosed accidently during delivery.[3,4] In major degree placenta previa there is high risk to mother in terms of both morbidity and mortality. Risks associated with minor degree placenta previa are comparatively less.[5]

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In cases of placenta previa presenting the hemorrhage there is malperfusion as well. The presence of retro placental hemorrhage on ultrasound in patients presenting with hemorrhage further aggravates the situation by causing more extensive separation. In severe cases fetus may be affected and patient herself may require transfusions. Morbidly adherent placenta (MAP) is defined as; abnormal invasion of placenta to either whole or part of myometrium of uterine linings. Classified according to degree of adherence and by amount of placental involvement classified into three types as placenta accrete increta, chorionic villi involving myometrium, placenta percreta, chorionic villi penetrating to serosal layer.[7] Acute episode of bleeding after delivery can be a hazardous and life-threatening complication. Emergency hysterectomy is usually undertaken in cases of ongoing hemorrhage after all conservative have been tried.[8] Weiner et al study showed that symptomatic placenta previa is associated with increased placental malperfusion lesions suggesting an association of maternal malperfusion with abnormal placental separation. The coexisting finding of RPH with symptomatic placenta previa can be seen as a marker for more extensive/severe placental separation, hence the association with maternal transfusion requirements and poorer fetal outcome.[7] So this study was carried out to find the placenta previa

incidence in pregnant females with its consequences on outcome of pregnancy.

MATERIALS AND METHODS

This is a cross sectional study conducted in Lady Willingdon Hospital for 8months i.e. March 2017 to November 2017. After approval from ethical review board and informed consent during this period, 4658 pregnant females underwent delivery in the hospital were included through non probability / consecutive sampling. Females of age 25-42years were included who presented at term (gestational age>37weeks as per LMP). Informed consent was obtained to include the patients in the study. Demographic data (name, age, gestational age, parity, previous mode of delivery) was also obtained. Females were evaluated for placenta previa. Females were followed-up in labour room till delivery. Mode of delivery was noted. After delivery, complications in females having placenta previa were noted including obstetrical hysterectomy, maternal death, anemia, blood transfusion, DIC, multi-organ failure. All the collected information was stored and analyzed in SPSS 22. Mean and SD were calculated for quantitative variables. Frequency and percentages were also calculated for categorical variables.

RESULTS

Mean age of patients were 33.20 ± 5.03years, mean gestational age was 35.38 ± 3.00 weeks. Out of the 4658 females, 2402 (51.6%) underwent spontaneous vaginal delivery and 2256 (48.4%) underwent cesarean section. Table 1**.** In females underwent cesarean section, 210 (9.3%) had placenta previa. Fig 1. Among them, 38 (18.1%) had MAP followed by obstetrical hysterectomy, 4 (1.9%) had DIC, 2 (1.0%) had multi-organ failure, 2 (1.0%) died, and 198 (94.2%) patients had blood transfusion. Table 2.

Table No.1: Baseline characteristics of females

Variables n= 4658	Mean + SD / Frequency (percentages)
Age (years)	33.20±5.03
Gestational age (weeks)	35.38±3.00
Gravidity primigravida Multigravida (2-4) grand multigravida (>4)	38 (18.1%) 100 (47.6%) 72 (34.3%)
Parity Primiparity multiparity grand multiparity	38 (18.1%) 100 (47.6%) 72 (34.3%)
Abortions	11 (10.5%)
Previous number of cesarean sections 0 1 2 -4 > 4	 160 (76.2%) 6 (2.9%) 42 (20.0%) 2 (1.0%)
SVD	2402 (51.6%)
LSCS	2256 (48.4%)

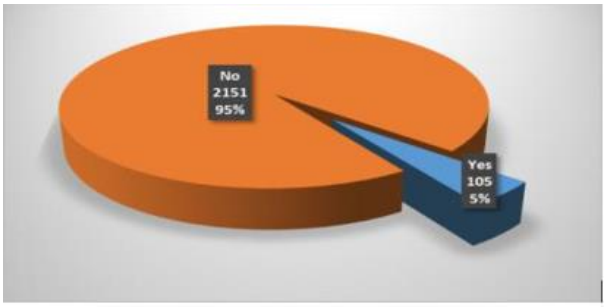

Figure No. 1: Distribution of placenta previa in all females underwent LSCS

Table No.2: Outcome in females having placenta previa

Outcome	Frequency	Percentage
Obstetrical Hysterectomy	38	18.1%
Death	2	1.0%
DIC	4	1.9%
Blood Transfusion	198	94.2%

DISCUSSION

In developing countries with a very high prevelance of anaemia, hemorrhage in obstetric is a cause of poor feto-maternal outcome.[3] Surgery is also associated with greater complication in placenta previa patients, sometimes leading to obstetric hysterectomy and massive life threating hemorrhage which might need blood transfusion. The maternal complications are higher in cases of placenta previa. These comprise of life threatening hemorrhage requiring transfusion of blood and blood products, total hysterectomy, septicemia and even maternal shock leading to death. As pregnancy advances the risk of bleeding increases. At gestation of 35 weeks, it is 4.7 percent and increasing to 59 percent at 38 weeks.[3,4-6] Bhutia et al in its study proposed the incidence of pregnancy with placenta previa in one of the Indian Hospital was 0.7% which is much lower as compared to our study.[9] Bahr et al., reported that the overall incidence of placenta previa was 0.73%. Major placenta previa (complete or partial) occurred in 56.5% women and minor placenta previa (marginal or low-lying placenta) in 43.5% women. Major and minor degree placenta previa incidence is not affected by maternal age and obstetrical history. The incidence of antepartum hemorrhage was higher after the confounding factors were controlled (OR 3.18; 95% CI 1.58-6.4, P = 0.001) and hysterectomy (OR 5.1; 95% CI 1.31-19.86, P = 0.019). Our results are comparable to Bhutia et al study.

In high-income countries, contributor to maternal mortality is not hemorrhage from placenta previa where as in low-income countries, postpartum hemorrhage is the major causative factor contributing towards poor materno fetal-outcome. The contributing factor is non-

utilization of healthcare services, lack of adequate blood transfusion services and delay in surgical procedures, due to difficulty in reaching tertiary care hospitals. Early diagnosis and treatment of sequelae of these feto-maternal complications should be undertaken.[9,10]

In 2012 a study conducted by Kauser R reported that in females with MAP, the frequency of PPH was high like 28.4% but cesarean hysterectomy was low (6.04%), these results are comparable with our study, where obstetrical hysterectomy rate was 18% and all cases were of morbidly adherent placenta.[10] But study of Sultana N reported that frequency of PPH was 15.6% but rate of hysterectomy was much higher as 50% among females with placenta previa where as in our study hysterectomy rate was 18.1%.[11] Reason might be less sample size. Sheiner et al, concluded in their study that although perinatal mortality was not directly linked to abnormal implantation, placenta previa leads to multiple possible obstetric complications. Hence, the detection of placenta previa demands a careful evaluation with timely delivery in order to reduce the associated feto-maternal complications.[12] Another study carried out in Uganda showed similar relationship between severe obstetrical hemorrhage and placenta previa, while in our study all patients presented with antepartum hemorrhage.[13] Placenta previa leads to maternal anemia, prolong hospital admissions and sometimes maternal shock and death. The fetal complications are growth restriction, congenital abnormalities and increased perinatal mortality rate.[14-16]

In a study by Kollmann et al showed that the placenta praevia incidence stands at 0.15 percent. There was an increase in maternal morbidity which showed that the incidence of ante-partum hemorrhage was 42.3 percent and post-partum was 7.1 percent, anemia incidence was 30 percent, morbidly adherent placenta stands at 4 percent and hysterectomy was 5.2 percent, as compared to our study, in which out of 4658 females, 2402 (51.6 percent) underwent spontaneous vaginal delivery and 2256 (48.4 percent) underwent cesarean section. In females underwent cesarean section, 210 (9.3 percent) had placenta previa. Among them, 38 (18.1 percent) had obstetrical hysterectomy, 4 (1.9 percent) had DIC, 2 (1.0 percent) had multi-systemic failure, 2 (1.0 percent) died, and 198 (94.2 percent) patients had blood transfusion.[17]

CONCLUSION

Women with placenta previa are considered high risk pregnancies. Rising incidence of cesarean section is alarming as associated with rising incidence of placenta previa. But the complications in the form of hysterectomy are higher in females with morbidly adherent placenta as almost all patients were un-booked and multiple blood transfusion is one of the major complication of pregnancy with placenta previa.

Recommendations: Delivery of placenta previa should be elective in presence of skilled birth personals with arrangement of blood and blood products. Patients should encourage about balanced healthy diet and iron supplements to optimize their health before delivery and frequent hospital visit to pick complications early and intervene them early.

Author's Contribution:

Concept & Design of Study:	Afroze Ashraf
Drafting:	Sumaira Fatima Sabir
Data Analysis:	Sumaira Fatima Sabir
Revisiting Critically:	Afroze Ashraf, Sumaira Fatima Sabir
Final Approval of version:	Afroze Ashraf

Conflict of Interest: The study has no conflict of interest to declare by any author.

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