

Fetomaternal Outcome with Placenta Previa and Morbidly Adherent Placenta, A Cross Sectional Study

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ABSTRACT

Introduction: Placenta previa occurs when a baby's placenta partially or totally covers the mother's cervix or the outlet for the uterus. The aim of this descriptive retrospective cohort study was to identify maternal complications, placental position, mode of delivery, management and fetal outcomes in Placenta Previa (PP) and Morbidly adherent placenta

Material and methods: Study was conducted in Department of Obstetrics and Gynecology, Pak Red Crescent Medical and Dental College (PRCM&DC) Hospital Lahore from June 2017 to June 2019. A total of 62 pregnant women were registered. All booked and un-booked mothers with and without history of previous section with provisional clinical and/or USG diagnosis of Placenta Previa or MAP.

Results: In total, 62 patients with PP were identified 22.58% patients with morbidly adherent placenta were unbooked and other wise are booked. 61.2% patients were the age group between 20-30 years and remaining are more than 30 years. In 25.8% type IV placenta previa and same 25.8% are morbidly adherent placenta and remaining are type I,II & III PP. Placenta previa, only 6.45% cases were diagnosed in 2nd trimester and 93.5% cases were diagnosed in 3rd trimester.

Conclusion: Placenta Previa and Morbidly adherent placenta are not a very uncommon condition. Frequency of Incidence increases as the rate of cesarean section or abdominal surgery were increases. Early diagnoses and pre plan mode of delivery will decrease the risk of low birth weight and low APGAR score infants.

Keywords: Placenta Previa (PP), Morbidly Adherent Placenta (MAP), Fetal Growth, Cesarean Section, Low Birth Weight, Feto-Maternal Outcome.

INTRODUCTION

Maternal and fetal morbidity and mortality from placenta previa is considerable and associated with high demands on health care resources¹⁻³ because Placenta previa can cause severe hemorrhagic bleeding during the pregnancy or/and at the time of delivery. It can be one of the obstetrician's worst nightmares which are associated with severe maternal morbidity and one of the major causes of maternal death.^{4,5}

In the women who were deliver previously by caesarean section or any abdominal surgery in past, there is an increase incident of morbidly adherent placenta.^{6,7,8} The incidence rate of caesarean section 1:533 births for the period from 1982 to 2002, much greater than previous reports ranging from 1:4027 to 1970s and 1:2510 to births in the 1980s,⁹ suggesting that this increase is mainly the result of the increasing rate of Placenta previa.¹⁰

PP mortality, maternal and fetal morbidity are substantial and

are associated with high demands on health care center.¹ The number of cases of PP and its complications are increases day by day and it is the major cause of increase incidence is cesarean sections and other causes such as myomectomy, uterine perforation, and advanced maternal age, short interval between two pregnancy, placenta previa, and sub mucous myoma. Since over the last two decades, combined with increasing maternal age and parity. According to the current studies, In Pakistan the incidence of Morbidly adherent placenta turned out to be 1.83/1000 deliveries.¹¹

MAP is a life threatening condition which is 90% associated with postpartum hemorrhage, disseminated intravascular coagulopathy (DIC), Anemia, multiple D&Cs and multiple organ failure.^{6,11,1} Morbidly adherent placenta (MAP) is the most commonly associated with placenta previa in women who previously delivered by caesarean section or in other words previous scare is the common side of placenta adhesion.¹² The aim of our study to identify the women who have placenta pervia and find out different maternal complications during pregnancy, frequencies of placental position, mode of delivery, management and fetal outcomes in Placenta Previa (PP) mothers.

MATERIAL AND METHODS

This was a prospective study conducted by Department of Obstetrics and Gynecology, Red Crescent Medical and Dental College (PRCM&DC) Hospital Lahore from June 2017 to June 2019.

A retrospective descriptive study was performed on 62 cases in Pak Red Crescent Medical and Dental College Lahore.

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Sample size was calculated with 95% Confidence Interval. All the ethical guidelines were followed. Participation in this study was voluntary. The purpose of the study was explained to every patient and an informed consent was taken. They were identified with diagnosis of placenta previa at and beyond 28 weeks of pregnancy. The diagnosis was confirmed by Trans-abdominal and trans-vaginal Ultrasound (grey scale and color Doppler) as and when required. All the information regarding age, parity, gestational age, social status, number of previous caesarean sections, and history of previous bleeding per vagina, ultrasound and other relevant investigations were entered in a specially designed Performa. The plan of management in individual cases was discussed with the multidisciplinary team involving the senior obstetrician, senior general surgeon, urologist, anesthesiologist, hematology and blood transfusion services. Neonatologist was informed for the premature baby care in cases of premature deliveries. Six units of blood, FFPS were arranged from the time of admission because of chances of unprovoked bleeding at any time. All women who come in health care center and on ultrasound diagnose of placenta previa and single pregnancy are included and history of smoking, multiple pregnancy, assisted conception, uterine abnormalities are our excluded. Apgar score was also recorded after delivery.

STATISTICAL ANALYSIS

All the data were recorded on pre-designed proforma. Data were entered and analyzed in statistical program SPSS version 20.0. Qualitative data like age, parity, previous mode of delivery etc, was calculated by simple frequencies and percentages. The correlation coefficient is a numerical value which is used to see the strength of the relationship between two quantitative variables; it is used to see the relationship between type of placenta previa and complications in antepartum and during partum.

RESULTS

In last 2 years 15089 patients’ visit in gynae & obstetrics department for antenatal care out of which 62 were diagnosed as a case of placenta previa and Out of 62 patients 19.4% were below 26 years, 41.9% were below 31 years and 38.7% were above 31 years old. Old and booked patients were 48 and 14 patients were new or un-booked. During the antenatal they were diagnosed of placenta previa by ultrasound 16.1% till 30 weeks of gestation, 16.1% at 35 weeks of gestation, and 67.8% after 35 weeks of gestation, as shown in table-1. Out of 62 patients 3% were prime gravida, 5% were gravida 1, 17% gravida 2, 22% gravida 3, 17% were gravida 4, 14% were gravida 5 and 22% were gravida 5+. Placenta previa type I are 16.1% cases, type II are 22.6% cases, type III

1	Maternal age	20-25 years 12	26-30 years 26	more than 31 year 24
2	Antenatal Care	Booked 48		Unbooked 14
3	Gestational age at time of diagnosis	16-30weeks 10	31-35weeks 18	>35weeks 34
4	Type of placenta invasion	PP type 1&2 24	PP type 3&4 30	Placenta increta 8
5	Management of adherent placenta	Hysterectomy 46		Uterine conservation 16
6	New born weight	Less than 2.5 kg 10		2.5 and more than 2.5 52
7	APGAR score	< 5 14		>5 48

Table-1: Socio demographic data and clinical characteristics:

		Management of adherent placenta	type of placenta invasion
Management of adherent placenta	Pearson Correlation	1	.586**
	Sig. (2-tailed)		.000
	N	62	62
type of placenta invasion	Pearson Correlation	.586**	1
	Sig. (2-tailed)	.000	
	N	62	62

** . Correlation is significant at the 0.01 level (2-tailed).

Table-2: Correlations between management of adherent placenta and type of placenta invasion

	N	Mean	Std. Deviation	Std. Error Mean
loss of blood	62	1.23	.422	.054
Management of adherent placenta	62	.26	.441	.056

Table-3: One-Sample Statistics

are 12.9% cases, type IV are 16.1% cases and 12.9% cases diagnosed as placenta increta on ultrasound out of total 62 patients (fig-1).

The table-2 has shown that correlation coefficient value is 0.586 which is away from 1 but it has (**), which shows that there is strong positive relationship between management of adherent placenta and type of placenta invasion and vice versa. 0.586 indicate variables which can be considered moderately correlate each other.

For the comparison between loss of blood during labor or at the time of delivery and management of adherent placenta. The table 3 has description of two variables. It depicts that average blood loss is 1.23 and Management of adherent placenta is 0.26 with 0.054 and 0.056 of standard error. Low birth weight (<5 kg) recorded and 52 fetus were healthy with weight more than 2.5 kg. Only in 14 fetus with APGAR less than 5 other 48 were healthy and APGAR more than 5.

DISCUSSION

The placenta may be located in the lower part of the uterus either covering or adjacent to the cervical outlet for a number of reasons.¹³ 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 previa than are woman at term.¹⁴

It was a prospective study on fetomaternal outcome in placenta previa and morbidly adherent placenta with and without previous cesarean section. Out of 15089 antenatal registered cases 62 cases found PP and MAP out of which 48 were booked cases while 14 were unbooked so the incidence rate of PP in our study was 0.41%, which is quite higher to the Ramli et al, Kanak et al^{15,16} study. Although by Chattopadhyay et al results, many women between 10 to 20 weeks' of gestation will have some evidence of placenta Previa, reported shows the incidence of placenta pervia to be 0.33%. Our higher incidence is probably related to the higher number of patients of high parity (para >5).¹⁷

According to Latif et al, women age 34 years or older had a two to three time's higher risk of placenta previa in relation to women 20-30 years old. Advancing maternal age appears to increase the risk of placenta previa independent of other factors.¹⁸ Our results also shows increase incidence rate of placenta previa in mothers who are more than 31 years of age. The incidence of placenta previa considerably increased in our hospital in every year.

In this present study we address different maternal and fetal complications like PPH, need of blood and FFP transfusion, bleeding in antepartum period, hysterectomy for adherent placenta, low birth weight and low APGAR score. History of previous placenta previa can also be a significant risk factor for placenta previa in next pregnancies.

The present study indicate that the women with type III and IV placenta previa terminate their pregnancies with cesarean hysterectomy are only 25.8% otherwise 74.2% are deliver their babies with route in cesarean section which is comparable to Iqbal et al.^{19,20} Blood loss quantity during pregnancy is directly proportion to the side of placenta. In

current study we found less blood loss in case of type 1 and type 2 placenta previa same results seen in A Karin et al.²¹ We found no significant difference in neonatal outcome, 16% shows lower weight than normal i.e <2.5 kg. Remaining students are healthy and good weight i.e >2.5kg, same results shows Kanak et al.^{22,4,1} The use of multidisciplinary approach will reduce the risk of maternal mortality and morbidity⁶, with good multidisciplinary control in current study, the average requirement of blood transfusion is less than 500ml is 77.4% and more than 500ml is more than 22.6% of patients.

CONCLUSION

Now a day Placenta Previa and Morbidly adherent placenta are very common condition. Frequency of Incidence increases as the rate of cesarean section or abdominal surgery were increases. Early diagnoses and pre plan mode of delivery will decrease the risk of low birth weight and low APGAR score infants

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