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OBSTETRICAL PROGNOSIS AFTER PLACENTAL ABRUPTION

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ABSTRACT

Introduction: Placental abruption is the premature separation of normally situated placenta after 24 completed weeks of pregnancy and before delivery of a baby. It is self extending process with accumulation of blood clots leading to more separation of placenta. The study was conducted to assess the perinatal mortality, morbidity in relationship to the severity of placental abruption and to estimate the magnitude of abruption. It is a descriptive and observational study. The study was conducted in the department of obstetrics and gynaecology, Sir Ganga Ram Hospital, Lahore over a period of one year from May, 2009 to May 2010.

Patients and Methods: A total of 80 patients with the diagnosis of placental abruption after 24 completed weeks of gestation were included in this study. Neonates were evaluated at the time of birth and followed upto 46 hours after birth.

Results: Among the 80 patients, only 14 were (17.5%) booked, while 66 (82.5%) remained unbooked. A total of 27 (33.75%) patients had pregnancy induced hypertension, 65 (81%) were anaemic. Polyhydramnios and multiple pregnancy were seen in 3 and 4 patients respectively. Majority of patients i.e. 47 (58.75%) delivered by abdominal route. Regarding the fetal outcome alive born babies with placental abruption were 41 (51.25%) in which 23 (28.75%) were preterm and 18 (22.5%) were full term. Thirty six (45%) intrauterine dead fetus and in whome 25 (31%) were preterm and 11 (13.75%) were full term, only 3 were still births. Twenty four (30%) neonates required resuscitation, while 20 (25%) neonate were shifted to neonatal intensive care unit. Iatrogenic prematurity was the underlying cause of most complications.

Conclusion: Perinatal morbidity and mortality is significantly high in patients of abruption placentae. Hypertension is a major predisposing factor for placental abruption.

Key Words: Placental abruption, Preeclampsia, Anaemia, Perinatal morbidity and mortality.

INTRODUCTION

Placental abruption is the premature separation of normally situated placenta after 24 completed weeks of pregnancy and before delivery of a baby. It is self extending process with accumulation of blood clots leading to more separation of placenta.

Basic cause is unknown but placental abruption has strong association with high parity, pre-eclampsia and hypertension.[1] It leads to fetal hypoxia and in sever cases may cause sudden fetal death.[2] About 5% of perinatal death is attributed to placental abruption.[3]

Pregnancy with placental abruption must be considered high risk pregnancy because of increased risk of small for gestation babies and its association with pregnancy induced hypertension, high maternal and perinatal mortality and morbidity.[4]

The purpose of study is to make assessment plan for pregnancy with placental abruption to reduce the risk of perinatal mortality and morbidity.

MATERIAL AND METHOD

The study was conducted in Obstetrics / Gynaecology Unit of Sir Ganga Ram Hospital, Lahore. It was descriptive / observational study conducted over one year from May, 2009 to May 2010. A total of 80 patients were included in this study. Patients with the diagnosis of placental abruption after 24 completed weeks of gestation, were included. Patients with unexplained APH, co-existent placenta praevia were excluded.

Neonates were evaluated at the time of birth and followed upto 48 hours after birth. The variable that affected the morbidity and mortality of the babies, the duration of gestation, mode of delivery, weight of baby, Apgar score of the baby at birth and 5 min later. The admission in the neonatal unit more than 48 hours and development of any complication considered as morbid. The statistical tests applied.

RESULTS

Total 80 patients having the placental abruption included in the study. There were only 14 patients (17.5%) booked and while 66 (82.5%) remained unbooked. The mean age of patient was 27.5 ± 6.4 year

(18 – 42 year).

46 patients (57.2%) were 20-30 year, 4 patients (5%) had age less than 20 years. Only 3 patients were more than 40 years. The mean parity was (4.59 ± 2.19), 36 patients had parity 2 – 4 while 20 patients were 5-7 para. 16 patients were primigravida and 8 patients were para 7.

It was observed that most of the patients 33 (41.25%) presented at gestational age between 32 – 37 weeks (Table 1). Only 17 (21.25%) patients presented less than 32 weeks. The mean gestational age was 36.4 ± 3.92 weeks.

Table 1: *Gestational age at the time of presentation.*

Gestational Age	Number	Percentage
< 32 weeks	17	21.25%
32 – 37 weeks	33	41.25%
> 37	30	37.50%
Mean ± SD	(36.4 ± 3.94)	

Majority of patients 39 (48.75%) had moderate degree of placental abruption while 26 (32.5%) had severe abruption only 15 (18.75%) had mild abruption. Main presenting complaints of patients included in the study were bleeding per vaginum, abdominal pain, loss of fetal movements. Maximum number of patients 63 (78.75%) presented with vaginal bleeding while 59 (73.75%) presented with labour pains and only 38 (47.5%) patients presented with loss of fetal movements. Association of placental abruption and other predisposing factors is shown in the table.

Table 2: *Association of abruption and other predisposing factor.*

Factors	Number	Percentage
Hypertension	27	33.75%
Anaemia	65	81.25%
Polyhydramnios	03	3.75%
Multiple pregnancy	04	05.0%

Sixty five patients were anaemic. Polyhydramnios and multiple pregnancy were seen in 3 and 4 patients respectively. No history of smoking observed among these patients (Table 2). Majority of patients i.e 47 (58.75%) delivered by abdominal route and frequency of caesarean section was maximum in case of severe abruption (Table 3).

Table 3:

Mode of delivery	Number	Percentage
Vaginal delivery	33	41.25%
Abdominal delivery	47	58.75%

Regarding the fetal outcome, live born babies with placental abruption were 41 (51.25%) of these 23 (28.75%) were preterm and 18 (22.5%) were full term. Thirty six were (45%) intrauterine dead fetus and in which 25 (31.25%) were preterm and 11 (13.75%) were full term, whereas 3 were still births (Table 4).

Table 4: *Fetal outcome of placental abruption.*

Fetal Outcome	Number	Percentage
Alive babies (n=4)		
Preterm	23	28.75%
Term	18	22.50%
Dead Babies		
Preterm	25	31.25%
Term	11	13.75%

Table 5: *Fetal outcome of placental abruption in relation to Apgar Score.*

	At birth		At 5 min	
	No	%		
< 4	21	26.25%	07	8.75%
4 – 7	20	25.00	22	27.5%
> 7	-	-	12	15

Table 6: *Fetal morbidity.*

Complications	Number	Percentage
Resuscitation required	24	30%
Admission to Nursery	20	25.0
Neonatal jaundice	6	7.5%
Anaemic	4	5%
Respiratory problem	10	12.5%

The fetal outcome in relation to Apgar score is shown in Table 5. The table 6 shows that fetal morbidity was also very high of them 24 (30%) neonates required resuscitation, 20 (25%) neonates were shifted to neonatal intensive care unit, 6 (7.5%) developed jaundice and 4 (5%) neonates suffered

from anemia and needed blood transfusion. Ten (12.5%) babies suffered from respiratory problem and 5 admitted babies expired after 48 hours in the NICU. Iatrogenic prematurity was the underlying cause of most complications.

DISCUSSION

Placental abruption is a common obstetrical problem associated with considerable maternal and fetal morbidity and mortality. The date collected in this study showed that 45% patients were para 2 – 4 and 57.5% mothers were between 20 – 30 years of age.

The studies shown that incidence slightly increases with high parity, lower socio-economic group and advanced maternal age.[5]

Results of this study have shown that 41.75% of cases presented at gestational age between 32 – 37 weeks, 37.5% of cases at gestational age more than 37 weeks. Only 21.25% presented at les than 32 weeks. The results are comparable with international studies.[6]

Majority of the patients 48.75% had moderate degree of placenta while 32.5% cases had severe placental abruption. As most patients came from peripheral areas and referred from primary care centre so late diagnosis and delay in arrival to hospital may be the cause of increase in moderate abruption.[7]

Studies showed that patients of abruption classically present with vaginal bleeding, abdominal pain and loss of fetal movement. In this study maximum number of patients 78.75% presented with vaginal bleeding following by labour pains and loss of fetal movement.[1]

Hypertension is a major pre-disposing factor for placental abruption and is more strongly associated with moderate and severe cases in which nearly 50% are hypertensive.[2,4] Study shows that 33.7% patients with hypertension. Hibbard and Golditch described folic acid deficiency increases the incidence of abruption placenta.[8] Risks factor identified in the study were anaemia, hypertension, multiple pregnancy.

Abruptio placentae is associated with high perinatal mortality and morbidity.[9]

According to the Green,[10] it is the most common cause of intrapartum fetal death and account for nearly 15% of perinatal mortality.[11,12]

This study shows fetal morbidity was also very high. 30% neonates required resuscitation while 25% were shifted to neonatal intensive care unit, in which 7.5% neonates developed jaundice and 5% neonates suffer from anaemia, while 12.5% neonates suffer from respiratory problem and 6.25% expired after 48 hours in the neonatal intensive care unit. PMR was high among premature than full term babies.[13,14]

Management of placental abruption depend upon the degree of placental abruption, associated complication, state of mother and fetus and gestational age. Mode of delivery depend different factor. Operative delivery was high in severe abruption.[15]

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It is **concluded** from current study that perinatal morbidity and mortality is significantly high in patients of abruptio placentae. Perinatal outcome is poor in un-booked patients. Severe placental abruption is found to be a cause of poor Apgar in majority of newborn, hypertension is a major predisposing factor for placental abruption. Perinatal morbidity and mortality is high among premature than in full term babies.

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