

ABRUPTIO PLACENTAE: RISK FACTORS AND FETO MATERNAL OUTCOME

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ABSTRACT

Objective: To determine the frequency of risk factors and feto-maternal outcome in patients with placental abruption.

Study Design: Descriptive study

Place and Duration of Study: Department of Obstetrics and Gynaecology Unit-II, Holy Family Hospital, Rawalpindi from January 2002 to December 2002

Patients and Methods: A total of 54 patients with placental abruption were studied. All the data collected through history, examination and investigations were recorded on a predesigned proforma and analyzed by computer

Results: During the study period of one year, 4121 deliveries were conducted and 54 (1.3%) cases of placental abruption were found. Hypertension was the most common risk factor for placental abruption followed by polyhydramnios, preterm premature rupture of membranes, twin pregnancy and trauma. 33 (61.11 %) delivered vaginally and remaining 21 (38.89%) had emergency caesarean section for various indications. Out of 57 babies delivered, 36 (63.16%) were born alive and 21 (36.84%) were still born. Total perinatal deaths were 24 (42.10 %). Twenty nine (50.87 %) of the babies were low birth weight and 14.24% babies were having congenital anomalies. Major maternal complication was primary postpartum haemorrhage. There was one maternal death due to disseminated intravascular coagulation secondary to massive haemorrhage.

Conclusion: Abruptio placentae is a major risk factor for maternal and fetal morbidity and mortality. Antenatal services should be provided to all women to reduce the incidence of abruptio placentae.

Key words: Abruptio placentae, feto-maternal outcome, perinatal mortality

INTRODUCTION

Abruptio placentae is defined as premature separation of normally implanted placenta from its uterine attachment prior to delivery. Exact aetiology of placental abruption remains unknown, but multiple predisposing risk factors have been identified. These include hypertensive disorders of pregnancy, advanced maternal age and polyhydramnios¹. Anaemia, preterm rupture of membranes, maternal trauma, cigarette smoking, alcohol consumption, cocaine abuse, sudden decompression of the uterus and grandmultiparity are other clinical determinants².

Classical clinical findings include vaginal bleeding, uterine tenderness, preterm labour, fetal distress and fetal death. Diagnosis may sometimes be difficult as symptoms and signs

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vary. Maternal and fetal survival are dependent on early diagnosis and intervention.

The purpose of this study was to determine the frequency of risk factors and feto-maternal outcome in patients with placental abruption.

PATIENTS AND METHODS

A one year prospective study was carried out in the department of obstetrics and gynaecology Unit-II of Holy Family Hospital, Rawalpindi from January 2002 to December 2002. Patients presenting with abruptio placentae, both in antenatal period and during labour were included in the study. Patients particulars were recorded on a predesigned proforma including age, parity, literacy status, socio-economic status, previous obstetric history, antenatal care received, pre-existing medical problems, timing and mode of delivery, neonatal outcome and finally maternal complications. At the time of admission, complete general physical, systemic and obstetrical examinations were performed. Relevant investigations including complete

blood picture, blood grouping and rhesus factor, renal function tests, coagulation profile and ultrasonography were carried out.

Management was planned according to the condition of the patient, degree of haemorrhage, duration of pregnancy and viability of the fetus. Mode of delivery was either vaginal or abdominal depending upon the severity of haemorrhage, fetal condition and Bishop score. Third stage of labour was managed actively. Placenta was examined for the evidence of abruptio and amount of retroplacental clots measured. Babies were examined by the paediatrician. Vigilant post partum monitoring was carried out.

RESULTS

Total number of deliveries during the study period were 4121. Patients with placental abruption were 54 (1.31%). There were 12 (22.22%) booked and 42 (77.78%) non-booked cases.

Ages of patients ranged from 21-40 years. Most of the women were in the age group 21-30 years (55.56%). The majority of patients (78.89%) belonged to the poor socio-economic class. The parity distribution showed 06 primigravidae (11.11%), 26 patients (48.14%) having parity 1-4 and 22 cases (40.74%) having parity more than 04.

The gestational ages at presentation ranged from 28-40 weeks. Distribution of gestational ages showed 25 cases (46.29%) in 28-32 weeks group, 15 cases (27.78%) in 33-36 weeks group and 14 cases (25.92%) in 37-40 weeks group.

Primary cause remained unknown in most of the women while certain risk factors were identified (Table-1). Majority of patients (62%) were anaemic with hemoglobin of 6-8 g/dl.

The mode of delivery was vaginal in 33 cases (61.11%), while caesarean section was performed in remaining 21 cases (38.89%) for various indications.

Maternal morbidity was high. Adverse maternal outcome was observed with severe grade of abruptio. Complications encountered are shown in table-2.

The amount of retroplacental clots was measured in the kidney tray. Most of the

patients 35 (68.81%) had retroplacental clots of more than 800 ml while 12 (22.22%) patients had more than 1500 ml clots. In the remaining 7 (12.96%) patients the clots were less than 500ml.

Total babies born were 57 (03 cases of twins), 36 (63.16%) were born alive and 21 (36.84%) were still born. Total perinatal deaths were 24 (42.10%) and perinatal mortality was 38.8%. There were 29 (50.88%) female and 28 (49.12 %) male babies. Fetal congenital anomalies were seen in 14.24% cases.

The percentage distribution of weight of new born babies is shown in Table-3.

DISCUSSION

Abruptio placentae is an important cause of maternal and perinatal morbidity and mortality. The most important factor is the severity of abruptio and its duration. The

Table-1: Risk factors of abruptio placentae, n=54

Risk Factors	Number	Percentage
Idiopathic	27	50 %
Hypertension	14	25.92 %
Polyhydramnios	04	7.40 %
Preterm Pre-labour rupture of membranes	04	7.40 %
Twins	03	5.56 %
Trauma	02	3.70 %

Table-2: Maternal complications.

Complications	Number	Percentage
Primary Postpartum Haemorrhage	14	25.92 %
Disseminated Intravascular Coagulation	04	7.40 %
Renal failure	04	7.40 %
Peripartum hysterectomy	03	5.56 %
Maternal Mortality	01	1.85 %

Table-3: Percentage distribution of weight of new born babies n=57.

Weight of Babies	Number of babies	%
< 2.0 kg	29	50.88 %
2.1 – 04 kg	26	45.61 %
> 04 kg	02	03.51 %

incidence of abruption has been quoted ranging from 0.5-2 % of pregnancies. In this study 54 (1.3%) women had abruption which is comparable with observation made by Saadia et al from King Edward Medical College in 2003 where abruption was seen in 2 % of hospital obstetrical population³.

In our study 42 (77.78%) patients were non-booked. This is because ours is a tertiary care hospital where complicated cases from a large number of inadequately equipped hospitals, private clinics and other health care centers are referred. The majority of patients (78.89%) belonged to poor socio-economic class. This may be an indication of the referral pattern of poor patients to our hospital rather than a true risk factor.

The highest frequency of abruptio placentae was between the maternal age of 21-30 years (55.56%), comparable with 54.71% found in the study of Iram et al⁴. The number of primigravidae were only 06 (11.11%) as compared to 26 (48.14%) having parity 1-4 and 22 (40.74%) having parity more than 04. This would tend to support multiparity as a risk factor for abruptio placentae⁵.

Majority of patients (62%) were anaemic with haemoglobin levels between 6-8 g/dl. This high frequency of maternal anaemia is reflective not only of the bleeding of abruptio placentae but is aggravated by an underlying chronic maternal nutritional deficit common in this country.

In this study, though the primary cause remained unknown in most of the cases, the frequency of hypertensive patients was 25.92 % which is consistent with the 26 % hypertensive cases reported at the University of California USA⁶. There is general agreement that the frequency of abruption is increased in women with hypertension and super imposed pre-eclampsia⁷.

Maternal morbidity was high with primary post partum haemorrhage (PPH) occurring in 25.92 % of cases. Three patients had peripartum hysterectomy due to severe PPH. The increased frequency of PPH was because of late presentation of cases with severe degree of placental abruption.

Regarding fetal outcome 63.16 % of the babies were born alive and 36.84 % were still born. Abruption was not an independent risk factor for poor outcome among infants born before 32 weeks gestation. A preterm delivery can increase the fetal morbidity in cases of abruption⁸.

The frequency of low birth weight babies was 50.88%. A similar study by Pitaphrom et al showed low birth weight babies to be 65%⁹. This could be attributed to premature termination of pregnancy due to severity of abruptio placentae, maternal socio-economic status and anaemia.

Fetal congenital anomalies were present in 14.24% as compared to 7.59% found by Jabeen and Gul. This was because most of the patients in the study group were non-booked with no antenatal checkup, so early diagnosis and termination of pregnancy for congenital malformations could not be considered¹⁰.

CONCLUSION

Placental abruption is an obstetric emergency that poses severe hazards to the pregnant woman and her fetus. In this study frequency of abruptio placentae was more in women belonging to poor socio-economic status with no antenatal care and pre-existing anaemia. Mass information regarding the importance of antenatal care to every pregnant woman in a nearby heath facility can reduce the frequency of abruption and thus maternal and fetal morbidity and mortality.

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