

# Feto Maternal Outcome Among Abruptio Placentae Cases at a University Hospital of Sindh

Razia Mustafa Abbasi, Naushaba Rizwan, Firdous Mumtaz and Shaista Farooq

## ABSTRACT

**OBJECTIVE:** To determine fetomaternal outcome in women presenting with abruptio placentae at our setup.

**DESIGN:** A descriptive study.

**SETTING:** Department of Obstetrics and Gynecology Unit-II, Liaquat University Hospital Hyderabad, Sindh – Pakistan. Study was carried out from January to December 2007.

**METHODS:** All patients presenting with antepartum hemorrhage due to abruptio placentae at any gestational age after 28 weeks to term were included in the study. Women having bleeding due to causes other than abruption like placenta previa, vasa previa, carcinoma cervix and other local lesions were excluded. All the data collected through history, examination and investigations were recorded on a predesigned proforma. Data were analyzed using SPSS version 10.0.

**RESULTS:** Total number of cases admitted in labour ward was 2563. Forty-eight (1.87%) women had abruptio placentae. Maternal complications were postpartum hemorrhage (16.6%), disseminated intravascular coagulation (4.16%) and renal failure (6.25%). Maternal death occurred in 4 women (8.33%). Adverse fetal outcome was noted in severe cases of abruption. Still birth occurred in 41.6% cases.

**CONCLUSION:** In our setup, frequency of abruptio placenta is comparable with local and international literature. Incidence of abruptio placenta is high in our women as most of the women belong to poor socio-economic class. Antenatal care plays an important role in decreasing the incidence of abruptio placenta.

**KEY WORDS:** Pregnancy. Abruptio. Fetomaternal outcome. Morbidity. Mortality.

## INTRODUCTION

Abruptio placenta is defined as the premature separation of the normally implanted placenta from 24 weeks to delivery of baby. Exact etiology of placental abruption remains unknown, but multiple predisposing risk factors have been identified. These include pregnancy induced hypertension (PIH), advanced maternal age and polyhydramnios.<sup>1</sup> Anemia, gestational diabetes, preterm labour, preterm rupture of membranes, chorioamnionitis, oligohydromnias, obstetric shock, short umbilical cord and velamentous cord insertion are other clinical determinants.<sup>2-4</sup> It has been found that smoking during pregnancy is associated with increased risk of abruption.<sup>5</sup> Maternal alcohol consumption and smoking by the partner turned out to be independent risk factors for placental abruption. Smoking by both partners multiplies the risk.<sup>6</sup> Pregnancy following placental abortion has increased risk of recurrent abruption.<sup>7</sup> Hypertensive state of pregnancy is associated with 2.5% to 17.9% incidence of placental separation.<sup>8</sup> Woman with HELLP syndrome have an increased risk of placental abruption.<sup>9</sup> Much of the maternal complications and perinatal mortality occurs

when women are admitted with severe abruption with an intrauterine death. This represents the most severe form of the disease.<sup>10</sup> Socioeconomic status has an important association with abruptio placenta. Women belonging to poor social class have an increased incidence of placental abruption. Placental abruption occurs in as many as 5% of pregnancies, although the majority of these are small and only visible on placental examination after delivery.<sup>11</sup> The condition is more common with increasing age and parity.<sup>12</sup> Classical clinical findings include vaginal bleeding, uterine tenderness, irritability, idiopathic premature labour and fetal distress or death. Only one or several of these findings may be present although diagnosis may sometimes be difficult as signs and symptoms vary, maternal and fetal survival are dependant on early diagnosis and intervention.

## PATIENTS AND METHODS

This descriptive study was carried out in the Department of Obstetrics and Gynecology (Unit-II) of Liaquat University Hospital, Hyderabad over a period of one year. On admission a detailed history was taken

regarding presenting complaints. General physical and abdominal examinations were performed. Routine and special investigations were carried out. After excluding placenta previa, vaginal examination was performed to assess the Bishop score. Management was planned according to the condition of patients, degree of hemorrhage, duration of pregnancy and viability of the fetus. Expectant management was considered where the hemorrhage was mild and gestational age was less than 37 weeks. Resuscitative measures were taken in moderate to severe degree of hemorrhage and pregnancy was terminated. Mode of delivery was either vaginal or abdominal depending upon the severity of hemorrhage, fetal condition and Bishop score. Second stage of labour was shortened with forceps and vacuum whenever required. Third stage of labour was managed actively. Placenta was examined for the evidence of abruption and amount of retro-placental clot was measured. Baby was received by the pediatrician. Vigilant postpartum monitoring was carried out. All the data were collected on a pre-designed proforma and analysed using SPSS version 10.

**RESULTS**

Total number of women admitted in labor ward was 2563. Among these, 48 patients (1.87%) had abruptio placenta. The patients belonged to the age group ranging from 21-40 years (Table I). Most of the women were in the age group 21-30 (31.08%). Most of the women (62.5%) who presented with abruptio placenta were para 2-4 (Table II). Most of the women who presented with abruptio placenta had gestational age >36 weeks (Table III). Primary cause remained obscure in most of the patients while certain risk factors were identified (Table IV). Most of the patients belonged to the poor social class (74.32%). Among 48 patients, 28 were unbooked with no antenatal record indicating preexisting anemia. Twenty women had regular antenatal check up. Out of them, 3 were mildly anemic with hemoglobin between 8-10 mg/dl. Remaining 17 had hemoglobin above 10 mg/dl. Folic acid deficiency as such was not found separately. Moderate to severe hypertension was found in 9 out of 48 cases (18.75%). Among 28 unbooked women, 8 had history of abruption in previous pregnancy (16.6%), however 3 out of 20 booked women also gave history of abruption in their previous pregnancy (6.25%). Adverse maternal outcome was observed with severe grade of abruption. Eight women had PPH (16.6%), DIC in 4.16% and renal failure in 6.25% cases. Maternal mortality was 8.33% (Tables V-VI). Adverse fetal outcome was found in cases of severe abruption, 58.3% were

born alive, out of them 16% suffered from birth asphyxia. perinatal mortality rate was 41.6% (Table VII).

**TABLE I:  
AGE DISTRIBUTION OF CASES**

| Age           | No. of Patients | Percentage |
|---------------|-----------------|------------|
| < 20 years    | 11              | 22.91%     |
| 21 - 25 years | 23              | 47.91%     |
| 26 - 30 years | 6               | 12.5%      |
| 31 - 35 years | 4               | 8.3%       |
| 36 - 40 years | 4               | 8.3%       |

**TABLE II: PARITY**

| Parity       | No. of Patients | Percentage |
|--------------|-----------------|------------|
| Primigravida | 7               | 14.58%     |
| 2 – 4        | 30              | 62.5%      |
| 5 – 7        | 8               | 16.66%     |
| 8 and above  | 5               | 10.47%     |

**TABLE III: GESTATIONAL AGE**

| Age in weeks | No. of Patients | Percentage |
|--------------|-----------------|------------|
| <30          | 7               | 14.58%     |
| 30 – 36      | 18              | 37.57%     |
| >36          | 23              | 47.97%     |

**TABLE IV: RELATIONSHIP WITH RISK FACTORS**

| Risk factors             | No. of Patients | Percentage |
|--------------------------|-----------------|------------|
| <b>Abruptio Placenta</b> |                 |            |
| Unknown                  | 22              | 45.83      |
| Anemia                   | 17              | 35.41      |
| Hypertension             | 9               | 18.75      |
| Multiple pregnancy       | 01              | 2.08       |
| Polyhydramnios           | 01              | 2.08       |

**TABLE V: MATERNAL MORBIDITY**

| Complication  | No. of Patients | Percentage |
|---------------|-----------------|------------|
| PPH           | 8               | 16.6%      |
| Renal failure | 3               | 6.25%      |
| DIC           | 2               | 4.16%      |

**TABLE VI:  
MATERNAL MORTALITY**

| Complication | No. of Patients | Percentage |
|--------------|-----------------|------------|
| Alive        | 44              | 91.66%     |
| Died         | 04              | 8.33%      |

**TABLE VII:  
FETAL OUTCOME**

| Complication | No. of Patients | Percentage |
|--------------|-----------------|------------|
| Alive        | 28              | 58.3%      |
| Still birth  | 20              | 41.6%      |

## DISCUSSION

Abruptio placentae is an important cause of maternal and perinatal morbidity and mortality. The most important factor is the severity of abruption and its duration. In this study, 48(1.87%) 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 population.<sup>13</sup> In this study, primary cause remained obscured in most of the women. Anemia was found as an associated factor in 35.41% of women, this was in contrast to the study done by Leunen K, et al, at University of Leuven, Belgium in 2003 in which hypertensive disorders were found in 75% of women out of 96 patients.<sup>14</sup> Most of the women presented with mild vaginal bleeding (43.90%) followed in frequency by moderate bleeding in 36.10% and heavy bleeding in 20% of women. Similar observation was made by Tikkanen M, et al, in which vaginal bleeding was common presenting symptom in 70% of women.<sup>6</sup> Similar observation was made by Tica VI, et al, in 95 women. The volume of placental hematoma was in direct concordance with the severity of the outcome.<sup>15</sup> In a study done by Glants C, et al, it was found that sonography is not sensitive for detection of placental abruption, but a positive finding is associated with more aggressive management and worse neonatal outcome.<sup>16</sup> Maternal complications encountered were postpartum hemorrhage (16.6%), disseminated intravascular coagulation (4.16%) and renal failure (6.25%). Maternal mortality rate was 8.33%. This study was compared with a study done by Pitaphrom A, et al, who found 103 cases of abruption, hemorrhagic shock in 19.4%, couvelaire uterus in 16.5% and DIC in 5.8%.<sup>17</sup> Regarding fetal outcome, 58.3% were born alive and 41.6% were stillbirths, 52.08% were premature. Abruptio was not an independent risk factors for poor outcome among infants born before 32 weeks gestation. A premature delivery can increase the fetal morbidity in cases of abruption.<sup>18-22</sup>

## CONCLUSION

In our setup, frequency of abruptio placenta is comparable with local and international literature. Incidence of abruptio placenta is high in our women as most of the women belong to poor socioeconomic class. Frequency of abruptio placenta was more in women belonging to poor socioeconomic status with antenatal checkup and preexisting anemia. Mass information regarding the importance of antenatal care of ever pregnant women in a nearby health facility can reduce the frequency of abruption and thus maternal and fetal morbidity and mortality due to abruption. Services of the health care providers can be taken to identify women at risk, early detection and timely referral of these women for proper management.

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*AUTHOR AFFILIATION:*

**Dr. Razia Mustafa Abbasi**

Assistant Professor, Department of Obstetrics and Gynaecology  
Liaquat University of Medical & Health Sciences,  
(LUMHS) Jamshoro, Sindh - Pakistan.

**Dr. Naushaba Rizwan** (*Corresponding Author*)

Senior Registrar, Department of Obstetrics and Gynaecology  
LUMHS Jamshoro, Sindh - Pakistan.  
E-mail:naushabarizwansyed@yahoo.com

**Dr. Firdous Mumtaz**

Associate Professor, Department of Obstetrics and Gynaecology  
LUMHS Jamshoro, Sindh - Pakistan.

**Dr. Shaista Farooq**

Professor, Department of Obstetrics and Gynaecology  
LUMHS Jamshoro, Sindh - Pakistan.