

A clinical study of abruptio placentae: Maternal and perinatal outcome

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Abstract

Background: Abruptio placentae is a major cause of maternal morbidity and perinatal mortality and is of serious concern in the developing world. Placental abruption is the major cause of antepartum haemorrhage, which complicates 4% of all pregnancies and is considered to be an obstetrical emergency. **Aims and Objectives:** To determine the outcome of pregnancy in terms of maternal and perinatal morbidity and mortality in these patients. **Material and Methods:** This was a prospective study conducted in the department of Obstetrics and Gynecology, MNR Medical College, Sangareddy from November 2014 to October 2015 for a period of 1 year. Total of 100 diagnosed cases of abruptio placentae were included in the study. **Results:** The incidence of abruptio placentae is 1.8%. It is most common in the women of age group 26-30 years. Majority of women were multigravidae. Vaginal bleeding was the most common clinical finding seen in 82% of the women. Fetal heart sound were absent in 40%. Live births were 60% while still births were 40%. PPH occurred in 20% of cases, shock in 19%, DIC in 12% and renal failure in 11%. 4% patients were identified with couvelaire uterus and treated effectively. **Conclusion:** There is a very high maternal morbidity and perinatal mortality in Abruptio placentae. **Key Word:** Abruptio Placenta, Maternal morbidity, Perinatal mortality.

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INTRODUCTION

Hemorrhage is a life threatening event right from conception till the end of puerperium and hence obstetrics has been aptly honoured to be bloody business¹. Placental abruption is the most common cause of antepartum haemorrhage and is defined as premature separation of normally implanted placenta². Abruptio placentae is still an unchecked cause of fetal mortality and morbidity. Improved management with early recourse of blood transfusion has significantly

brightened the maternal outcome. Even then placental abruption with concealed haemorrhage carries with it a much greater maternal hazard because the extent of the haemorrhage is not fully appreciated³. The primary cause of placental abruption is unknown. Various studies have reported risk factors for abruptio placentae which include age, parity, nutritional state, socio economic status, hypertensive disorders of pregnancy, maternal diabetes, premature rupture of membranes, chorioamnionitis, cigarette smoking, folic acid deficiency, drugs like cocaine, alcohol, preterm labour, trauma, hydramnios, uterine anomalies and tumors, multiple gestation, previous history of abruption⁴. Abruptio placentae has been associated with poor maternal and fetal outcome like post partum haemorrhage with its sequelae of acute tubular necrosis and DIC, low birth weight babies, increased incidence of prematurity and still birth⁵. Maternal and fetal survival depends on early diagnosis and intervention.

METHODS

Study group consisted of patients admitted to labour room in department of OBG, MNR Medical college and Hospital, Sangareddy with clinical diagnosis of abruption placentae and gestational age more than 28 weeks from November 2014 to October 2015. Placental abruption was diagnosed based upon history of abdominal pain, vaginal bleeding and ultrasonographic evidence of placental abruption. Patients with unexplained antepartum haemorrhage or coexistent placenta previa on ultrasound examination were excluded from the study. The maternal outcome in terms of anemia, shock, renal failure, DIC, puerperal complications and death were evaluated. Simultaneously perinatal outcome was monitored.

RESULTS

Table 1: Age distribution among cases of abruption

AGE GROUP	INCIDENCE
<20 years	15%
21-25 years	36%
25-30 years	40%
31-35 years	7%
>35 years	2%

Table 1 shows the incidences of abruption placentae in different age groups. When the age was analysed based on subgroups displayed, the highest incidence was found among 25-30 years accounting for 40%. Meanwhile the incidence below 20 years was 15% and in age group more than 35 years was 2%.

Table 2: Parity distribution

PARITY	INCIDENCE
Primi	20%
G2 – G5	64%
G6 and above	16%

The incidence of abruption was highest among Gravida 2 to Gravida 5 comprising of 64%. It is seen that two thirds of the cases of abruption occurred in multiparous patients.

Table 3: Distribution of cases based on signs and symptoms of abruption:

SIGNS/SYMPTOMS	PERCENTAGE
Vaginal bleeding	82%
Pain abdomen	61%
Absent FHS	40%
Loss of fetal movements	33%
Shock	19%
Hypertension	29%
Anemia	80%

As is shown, the most common presentation is vaginal bleeding followed by pain abdomen which was seen in 82% and 61% respectively. FHS was absent in 40% of

the fetus. Shock was present in 19%. 80% had anemia indicated by pallor.

Table 4: Distribution of cases based on etiological factors:

ETIOLOGICAL FACTORS	PERCENTAGE
Hypertensive disorders of pregnancy	29%
Uterine pathology	-
Multiple pregnancy	4%
Trauma	1%
Hydramnios	2%
Unknown	64%

The main etiology recognized was hypertensive disorders of pregnancy with an incidence of 29%. There was 1 case of non catastrophic blunt abdominal trauma resulting in abruption. Hydramnios was noted in 2 cases. Multiple gestation was found in 4% of cases. In majority of the cases (64%), the cause was not known.

Table 5: Incidence of complications in abruption placentae

COMPLICATION	PERCENTAGE
Shock	18%
DIC	12%
Renal failure	11%
PPH	20%
Couvelaire uterus	4%
Evidence of thrombocytopenia	7%

20% had Postpartum haemorrhage, shock was present in 18% of cases, DIC IN 12% and Renal failure in 11%. The incidence of couvelaire uterus in our study was 4%.

Table 6: Perinatal outcome in case of abruption placentae:

FETAL OUTCOME	PERCENTAGE
Live birth	60%
Still birth	40%

60% had live birth, 40% were still born.

DISCUSSION

Present prospective study was conducted with the objective to study various outcomes in abruption placentae. We studied 100 cases of placental abruption presenting after 28 weeks and determined the maternal and perinatal outcome. In our study 80% patients with placental abruption were multiparous. This figure is close to figure of 92% in a study conducted by Bibi S et al⁶. Abruption can occur at any stage in pregnancy but 33-36 weeks appears to be the most vulnerable period. The incidence of abruption increases with maternal age. In the first and second trimester evaluation of risk (FASTER) trial, women older than 40 years were 2.3 times more likely to experience abruption compared with those 35 years or younger⁷. Hypertensive disorder in pregnancy was an important etiological factor seen in 29% cases in our study.

Similarly Anant CV et al⁸ reported threefold increase in abruption in cases of chronic hypertension and four fold with severe pre eclampsia. Among the maternal complications, postpartum haemorrhage was commonest followed by shock, DIC, renal failure. Postpartum haemorrhage occurred in 20% of patients in our study, whereas study by Talpur NN reported PPH in 28% of patients which is nearly close to our study⁹. Shock was seen in 18% of patients in our study which is close to 24.6% shock cases reported in a study by Shrivatsava V¹⁰. DIC was associated with 12% of the patients in our study. Sher G observed DIC in 10-12% of his study patients with severe abruption and fetal demise which is comparable to our study¹¹. In our study, vaginal bleeding was the commonest presentation in 82% of patients which is comparable to the study conducted by Hossain et al¹². Regarding fetal outcome, 60% were born alive and 36% were still births and 4% neonatal deaths. Perinatal mortality has been strongly associated with abruption placenta in both national and international literature. This condition can be prevented with good antenatal care, early diagnosis, treatment of risk conditions that can cause abruption, correction of anaemia, timely caesarean section, blood transfusion and good neonatal intensive care will help further to lower the perinatal, maternal morbidity and mortality.

CONCLUSION

Abruptio placentae is common in women with advancing age, high parity, hypertensive disorders of pregnancy and smoking. Abruptio placenta may recur in subsequent pregnancy. Abruptio placenta is associated with poor maternal and fetal outcome. This was probably due to low socio economic status, lack of awareness of health education, poor transportation and appreciable short comings in health facilities. The incidence although cannot be eliminated, care can be taken to decrease the overall incidence and severity of condition. By avoiding high parity by timely sterilization, improved nutritional status, good antenatal care, strict surveillance, early intervention, expeditious delivery, prompt action at the time of occurrence can go a long way in bringing better results and reduce the gravity of situation.

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