

A Study of Maternal and Foetal Outcomes in Abruption Placenta – A Prospective Observational Study at CAIMS, Karimnagar

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ABSTRACT

Background: Abruption Placenta is a major cause of maternal morbidity and perinatal morbidity. Placental abruption complicates about 1% of all pregnancies and is a major cause of vaginal bleeding in the latter half of pregnancy. The aim of study was to assess outcomes in the mother and foetus with a diagnosis of placental abruption.

Materials and Methods: The study was conducted over one year from February 2015 to March 2016 on 60 patients. Patients with abruption were confirmed by the presence of retro placental clots or depression of underlying placental tissue. All the details of the history, examination, investigations, details of delivery and baby were recorded.

Results: Primary objective of the study was to evaluate the outcomes in patients with diagnosis of placental abruption. Out of 60 women vaginal delivery happened in 64% and abdominal delivery in 36%. Greater than 50% abruption occurred in 20% cases. Primary PPH occurred in 12% and maternal mortality occurred in one case (4%) with DIC and renal failure. In 80% cases blood transfusion has been done. IUD was seen in 32 % and perinatal death rate was 12%.

Conclusion: Placental abruption had a profound impact on maternal complications including DIC, shock, renal failure, couvelaire uterus, and perinatal death.

Keywords: Abruption placenta, maternal outcomes, foetal outcomes

INTRODUCTION

Abruption placenta is premature separation of a normally situated placenta from the uterine wall after the period of viability. Abruption complicates approximately 1% of all pregnancies.^[1] It is a leading cause of maternal morbidity and perinatal mortality, especially in the developing world. Two types of abruption which are well recognized are, revealed and concealed.^[2]

In revealed variety, blood tracks between the membranes and escapes through vagina and cervix. In concealed variety blood collects behind the placenta and there is no evidence of vaginal bleed. Abruption commonly is revealed type with vaginal bleed and is characterized by

pain. Exact cause of abruption remains unknown but it arises from haemorrhage into the decidua basalis of the placenta. Multiple risk factors have been identified which include Pregnancy Induced Hypertension (PIH), advanced maternal age and polyhydramnios.^[3]

Maternal risks associated with abruption include massive blood loss, disseminated intravascular coagulation (DIC), renal failure and maternal death^[4]. Abruption is also disastrous to the foetus in that it is associated with perinatal mortality as high as 60 percent.^[5]

Maternal complications include haemorrhagic shock, DIC, renal failure and ischaemic necrosis of distal organs like liver, adrenal, pituitary and uterine apoplexy. Uterine apoplexy further causes Post Partum Haemorrhage

(PPH). Foetal complications include hypoxia, anaemia, growth restrictions, prematurity, neurodevelopmental problems and foetal demise^[6]. The aim of study was to assess outcomes in the mother and foetus with a diagnosis of placental abruption.

MATERIALS AND METHODS

The present study was conducted at CAR Institute of Medical Sciences, Karimnagar from February 2015 to March 2016. All cases of Antepartum haemorrhage (APH) like placenta previa, extraplacental and indeterminate causes other than abruption were excluded. The study includes 60 pregnant patients with abruptio placenta. The study was conducted as a prospective observational study after clearance from Institutional Ethics Committee. Patients were included only after obtaining an informed consent.

A detailed obstetrics history was obtained. All patients were admitted as emergency. The diagnosis of placental abruption was clinical, based on characteristic signs and symptoms. This was then confirmed by evaluation of placenta after delivery which revealed a clot or depression on the maternal surface.

Clinical signs used in diagnosis were tense, tender and irritable uterus, signs of shock which are out of proportion to blood loss and abnormalities of fetal heart rate. After initial workup, depending on the maternal condition resuscitation measures were taken, mode of delivery was decided depending on the state of mother, gestational age, severity of abruption and state of fetus. Fetal wellbeing was assessed with ultrasonography and cardiotocography. Maternal outcomes were followed for mortality and morbidity which can be due to hemorrhagic shock, DIC, ARF, PPH. Fetal outcome studied were perinatal mortality, prematurity, APGAR score, admission to neonatal intensive care unit (NICU). All information was gathered on a pro forma and then analyzed by calculating percentages.

RESULTS

Total number of women admitted in labour between February 2015 to March 2016 was 3363, among these 60 were diagnosed and confirmed to have abruption placenta (1.8%). 6.67% of the patient were less than 25 years, 76.67% were 26 – 35 years and 10 patients (16.67%) were above 35 years.

Incidence was higher in multiparas i.e. 43 out of 60 patients (71.67%) compared to 17 primigravidas diagnosed with abruption i.e. 28.3%. Out of 60 patients 41 had regular antenatal checkups (68.3%) in comparison to 19 patients (31.67%) who were unbooked. (Table 1)

Table 1: Study group characteristics

Patient Variables	Number of Patients	Percentage
< 25 years	4	6.67%
26 – 35 years	46	76.67%
>35 years	10	16.67%
Primigravida	17	28.3%
Multigravida	43	71.67%

PIH was the most common risk factor accounting for 16.67% of abruptions. 6.67% of the cases were due to short cord. Three patients complained of a preceding abdominal trauma causing 5% of Abruptions. In 70% of the cases the cause was obscure (table – 2).

Table 2: Distribution of risk factors for abruption

Risk Factor	Number of Patients	Percentage
PIH	10	16.67%
Short cord	4	6.67%
Trauma	3	5%
Smoking	1	1.67%
Unknown cause	42	70%

The commonest cause of maternal morbidity was hemorrhagic shock (20%). Two patients showed DIC (3.3%) and these two patients later on landed up in ARF (3.3%). Post Partum Haemorrhage was observed in 13.3% of the patients. 5 maternal deaths occurred despite all management protocols being followed which brings the maternal mortality to 8.3%. (Table – 3)

Table 3: Maternal morbidity outcomes

Maternal complication	Number of patients	Percentage
PPH	8	13.3%
DIC	2	3.3%
ARF	2	3.3%
HAEMORRHAGIC SHOCK	12	20%
DEATH	5	8.3%

Out of 60 patients 61.67% (37 patients) were delivered by normal vaginal route and 23 patients (38.3%) were delivered by cesarean section (Table – 4).

Table 4: Mode of delivery

Mode of delivery	Number of patients	Percentage
Vaginal delivery	37	61.67%
Caesarean section	23	38.3%

Adverse foetal outcomes were associated with accidental haemorrhage, Intrauterine Foetal Death was diagnosed in 45% of the patients at the time of admission and 33 mothers had live babies (Table – 5).

Table 5: Distribution of fetal outcome

Fetal Outcome	Number of patients	Percentage
IUFD	27	45%
LIVE BABIES	33	55%

DISCUSSION

The incidence of abruptio was found to be 1.8% at our institute, Ananth et al found the incidence to be around 0.8% to 1.5%.^[7] A higher incidence could be attributable to the centre being a referral centre. Majority of the patients were in the age group of 26 – 35 years i.e. 76.6%.

A higher percentage of cases were seen in multigravida which is also in accordance with Kramer et al.^[8] Most of the causes were unknown and among known causes PIH was the commonest i.e. 16.67% which is in accordance. This is in accordance which research done by Abdella at al who reported an increase in incidence of abruptio in women with PIH.^[9]

Maternal morbidity and mortality wee significantly increased with highest morbidity being reported with the occurrence of PPH which is in accordance with studies done by Bibi et al.^[10] Death was reported in 5% of all abruptio cases despite all resuscitative and obstetric management.

61.67% were taken for normal vaginal delivery and 38.3% were taken for cesarean section in maternal and foetal interest. Foetal interest was of prime importance for considering cesarean section. Foetal hypoxia or distress was considered an indication for emergency cesarean section lest foetal demise occurs if trial is given.

45% of the patients presenting with abruptio had no detectable heart sounds and IUFD was confirmed by ultrasonography. 55% of all mothers delivered live babies. 37.7% of still births were reported by Shrivastava et al.^[11]

CONCLUSION

In our setup the incidence of abruptio was slightly higher than rates described in literatue probably because the centre is a referral centre. Placental abruptio was associated with higher maternal and foetal morbidity and

mortality. The predisposing factors of abruptio should be evaluated carefully so that such dismal outcomes could be prevented. Presently accurate prediction of abruptio is very difficult which makes it a dreaded obstetric disease due to maternal and foetal outcomes.

Early diagnosis with immediate delivery is essential to ensure maternal and foetal well being. In cases of preterm infants delivered in maternal interest evaluation of neonatal services is essential.

CONFLICT OF INTEREST :

The authors declared no conflict of interest.

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