Abruption Placenta-Retrospective Study On Maternal And Foetal Outcome

Dr Nilam Badani*, Dr Dipti.C.Parmar **

*Resident Doctor,** Associate Professor, Department of Obstetrics and Gynecology,GMC, Bhavagar 364001.

Abstract: Background: It is a form of antepartum haemorrhage where the bleeding occurs due to separation of placenta partially or totally from its implantation site after 20 weeks of gestation before the delivery of feteus. It is one of the major causes of antepartum haemorrhage which complicates 3% of pregnancies. Aims And objective: Aim of study is to maternal and perinatal outcome of Abruptio placenta in Government Medical College Bhavnagar, Gujarat And To know incidence of Abruptio placenta. Material and Method: This is a retrospective study analysing the case sheets of abruptio placenta in Government Medical College Bhavnagar, Gujarat from June 2018-June 2019. As most of the patients were admitted as emergencies placental abruption was suspected based on clinical features of abdominal pain ,vaginal bleeding, uterine tenderness, hypertonic uterus and diagnosis was confirmed by retroplacental clots after delivery which was used to estimate the amount of bleeding and severity of abruption. Fetalwell being was assessed with ultrasonography and cardiotocography. Results: The total number of deliveries from June 2018 to June 2019 at Sir T hospital, Bhavnagar were 5947 deliveries , out of which 45 cases were found to be Abruption .The incidence of Abruption placenta was 0.7%. We found 48.38% of patients with severe preeclampsia, 6.6% patients with eclampsia, 11.1 % patients with chronic hypertension and 33.42% patients with normotensive. Conclusion: Antenatal care which identifie the risk factors like PIH plays an important role in decreasing incidence of abruptio placenta and improving maternal and fetal outcome. Regular antenatal check up , anaemia correction, early diagnosis and identification of gestational hypertension and pre eclamptiatoxemia would reduced the maternal and perinatal morbidity and mortality. [Badani N Natl J Integr Res Med, 2020; 11(1):62-65]

Key Words: Abruptio Placenta,Antepartum Haemorrhage,Eclampsia

Author for correspondence: Dr. Dipti C.Parmar, Associate Professor, Department Of Obstetrics & Gynaecology, GMC Bhavnagar, E-Mail : kda2308@yahoo.com

Introduction: It is a form of antepartum haemorrhage where the bleeding occurs due to separation of placenta partially or totally from its implantation site after 20 weeks of gestation before the delivery of the fetus.Abruptio placentae contributes nearly 30% of all APH cases and majority (60%) occur in the third trimester of pregnacy. It occurs 1 in 200 deliveries(0.5%). It is a significant cause of perinatal mortality(15-20%) and maternal mortality(2-5%).Perinatal asphyxia is one of the major risk factors for poor prognosis, including perinatal death and brain damage[1].

Types of Abruption Placenta:

Revealed: Following separation of the placenta the blood insinuates downwards between the membranes and decidua. Ultimately the blood comes out of the cervical canal to be visible externally . This is the most common type.

Concealed: The blood collects behind the separated placenta or collected in between the membranes and decidua. The collection is prevented from coming out of the cervix by the presenting part which presses the lower segment. At times blood may percolate into the amniotic sac after rupturing the membranes. This type is rare (10%-20%). It is likely to cause more CONSUMPTIVE COAGULOPATHY because increased pressure within the intervillous space caused by extending retroplacental clot forces more placental thromboplastin into maternal circulation.

Mixed: In this type, some part of the blood collects inside and part of it is expelled outside. This is quite common.

Pathogenesis: Placental abruption is initiated by haemorrhage into decidua basalis. The decidua then splits leaving a thin layer adhered to the myometrium. Consequently, the process begins as decidual haematoma and expands to cause separation and compression of adjacent placenta.

Abruption likely begins with rupture of a decidual spiral artery to cause a retroplacental haematoma. This can expand to disrupt more vessels and extend placental separation. The features of retroplacental haematoma are depression found on the maternal surface of the placenta with clot which may be found firmly attached to the area. Areas of infarction with varying degrees of organisation[3].

Etiology: Hypertension in pregnancy,Advancing age,Poor socioeconomic status, Smoking, High birthorder, Trauma, Sudden uterine decompression, Short cord , Supine hypotension syndrome,

Placental anomaly, Folic acid deficiency, Uterine factor, Torsion of the uterus, Cocaine, use, Thrombophilias(3-7),Hyperhomocysteinemia, Prior abruption(10-50),Chronic abruption Sick placenta[2].

Material And Methods: This is a retrospective study analysing the cases ofabruptio placenta in Government Medical college, Bhavnagar, Gujarat from June 2018-June 2019. From those cases details regarding age of the patient,parity, maternal high risk factors like PIH, poly hydramnios were collected.

All other causes of antepartum haemorrhage like placenta praevia and other extraplacental causes were excluded. As most of the patients were admitted as emergencies, placental abruption was suspected based on general and systemic examination and clinical features of vaginal bleeding, uterine tenderness, hypertonic uterus and diagnosis was confirmed by retroplacental clots after delivery which was used to estimate the amount of bleeding and severity of abruptio placenta. Fetalwell being was assessed with ultrasonography and cardiotocography. Maternal complications studied were PPH, DIC, ARF, haemorrhagic Shock, pulmonary edema and infections. Fetal outcome in the form of perinatal mortality (stillbirth and neonatal death) prematurity and admission to the neonatal care unit were studied.

Result: The total number of deliveries from June 2018 to June 2019 at Sir T hospital, Bhavnagar were 5947 deliveries, out of which 45 cases were found to be Abruptio .The incidence of Abruption placenta was 0.7%.

Table1: Incidence Of Abruption

Total Deliveries June2018 To June 2019	Total No Of Abruptio	Incidence
5947	45	0.7%

Table 2: Age

Age	Cases Of Abruption(%)
<20 Years	15.5
20-25 Years	44.4
26-30 Years	23.1
>30 Years	17

Most of abruptio placenta cases were between 20-25 year.Next common age group were 26-30 years. Least incidence was seen among <20 years.

Table 3: Parity

Parity	%
Para -1	22.22
Para -2	13.33
Para -3	40.01
>4 Para….	24.43

Abruption was common among patients having high birth order pregnancy.

Table 4: Association of PIH

Type	Cases of Abruption(%)
Severe Preeclampsia	48.38
Eclampsia	6.6
Chronic HT	11.1
Normal BP	33.92

Abruption was common among patients who had severe preeclampsia than who were normotensive. Most of them were associated with anaemia.

Table 5: Maternal complication

Complications	Cases of Abruption(%)
PPH	22.22
DIC	17.55
ARF	15.22
Shock	15.23
Pulmonary Edema	8.47
Infection	11.11
Others	10.16

Maternal complication associated with abruption were Postpartum Haemorrhage(PPH), Disseminated intravascular coagulation (DIC), Acute renal failure(ARF), Shock, Pulmonary

edema, Infection. Among which postpartum haemorrhage.

Table 6: Fetal Outcome

Fetal Outcome	Cases Of Abruption(%)
Live Birth	71.1
Still Birth	28.9

71.1% had live birth. 28.9% Had stillbirth. Among 31 live birth 7 died in the neonatal period due to prematurity.Otherfetal complications included hypoxia, anaemia, growth restriction ,prematurity.

Discussion: Placental abruption is one of the serious complications of pregnancy, as it leads to both poor maternal and fetal outcome. The incidence of abruptio placenta was 0.7% in our study, which is similar to study by Wasnik SK[4]. The signs and symptoms of abruptio placenta vary depending upon the severity of bleeding and the degree of separation of the placenta.

Abruption can occur at any stage in pregnancy but 32-36 weeks appears to be the most vulnerable period[5]. We found 48.38% of patients with severe preeclampsia, 6.6% of patients with eclampsia, 11% of patients with chronic hypertension developed abruption in our study. Among the maternal complications, Postpartum Hemorrhage (PPH) was commonest followed by Disseminated Intravascular coagulation (DIC), Acute Renal Failure (ARF), shock, pulmonary edema and infection. PPH occurred in 22.22 % of patients in our study, were as study by Talpur NN reported PPH in 28% of patients[6].

DIC was associated with 17.55 % of the patients in our study. Sher G observed DIC in 10-20% of his study patients with severe abruption and fetal demise which is comparable to our study[7].Renal failure is one of the major causes of maternal deat[8]. We found ARF is reported in 15.2 % of the cases and Shock in 15.23 % were as study from Shrivatsava V reported 24.6% shock cases[10].

Pulmonary edema occurred in 8.47% of patients in our study which is comparable to study by Subramaniyan V were it is reported in 9.3% of the cases [11]Puerperal sepsis was found to be in 11.1 % of patients in the study by Choudhary V, in our study it is reported in 9.8% of the patients[12]. Regarding fetal outcome, 71.1% were born alive and 28.9% were still births. Abruption was not an independent risk factor for poor outcome among infants born before 32 weeks of gestation. A premature delivery can increase the fetal morbidity in cases of abruption.Routine antenatal check-up, correction of anemia, timely referral, timely caesarean section, liberal blood and blood components transfusion and good neonatal intensive care unit will help further to lower the perinatal and maternal morbidity and mortality.

Conclusion: This study reveals that Severe preeclampsia, eclampsia, chronic hypertension, high parity are independent risk factors for abruptio placenta. Antenatal care which identifies the risk factors like PIH plays an important role in decreasing incidence of abruptio placenta and improving the maternal and fetal outcome. Regular antenatal check up , anaemia correction, early diagnosis and identification of gestational hypertension would prevent the maternal and perinatal morbidity and mortality. It should be managed where advanced maternal and neonatal facilities are available. Early detection and active management will reduce morbidity.

Team efforts by obstetrician , intensivist and neonatologist is required for better neonatal and fetal outcome.

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