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RESEARCH ARTICLE

MATERNAL AND PERINATAL OUTCOMES IN PREGNANCY ASSOCIATED WITH ABRUPTIO PLACENTA

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Abstract

Background: Placental Abruption is an important cause of antepartum haemorrhage. It is defined as the separation of the placenta either partially or totally from its implantation site before delivery. APH is a major cause of maternal and perinatal morbidity and mortality. Therefore the study was planned to study the maternal and perinatal outcomes in patients of abruption placenta.

Methods: The present study was conducted in the department of obstetrics and gynaecology, SMGS, Hospital, Govt. Medical College Jammu over a period of 1 year. It was a prospective study and all case of Abruption placenta \geq 28 weeks of gestational age were included.

Results: It was observed that maximum cases of Abruption Placenta i.e 67.65% were multigravida. 41.47% of cases of Abruption Placenta had hypertension. 4.41 % had Polyhydramnios. 61.76% delivered vaginally. 23.53% patients had postpartum haemorrhage whereas only 2.98% had undergone Postpartum Hysterectomy. The most common fetal complication in Abruption Placenta was prematurity (35.71%). 5.89% patients of Abruption Placentas died during Peripartum period. Perinatal mortality was high 48.58%.

Conclusions: Abruption placenta is associated with significant maternal and perinatal morbidity and mortality. Good regular antenatal care and availability of emergency medical services remains the backbone for the good maternal and perinatal outcomes.

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Introduction:-

Placental Abruption is an important cause of antepartum haemorrhage. It is defined as the separation of the placenta either partially or totally from its implantation site before delivery. The Latin term abruption placentae means rending asunder of the placenta and denotes a sudden accident, which is a clinical characteristic of most cases. Abruption placenta occurs in approximately 1% of all deliveries. Abruption severe enough to cause fetal death is less commonly seen in 1:420 deliveries.¹ Exact aetiology is not known, but there are some associated factors which include: hypertension and severe pre-eclampsia, direct trauma, high parity, low socio-economic status, polyhydramnios, folate deficiency and short umbilical cord. The incidence is four times greater in multipara as compared to primigravida. Preeclampsia is by far the most predisposing factor in the etiology of abruption. Inherited thrombophilias increase the risk of abruption by 3-7 fold.² The risk of placental abruption in the subsequent pregnancy is significantly increased and has been reported as high as 22%.³

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The maternal complication in patients with APH are malpresentation, premature labor, postpartum hemorrhage, sepsis, shock and retained placenta. Patients with APH have higher rates of caesarean section, Peripartum hysterectomies, massive haemorrhage and even death. This massive haemorrhage in turn can lead to major blood loss, hypovolemic shock, renal failure, liver failure and adult respiratory distress. Pulmonary oedema, DIC, postpartum anaemia and Sheehan's syndrome are other major maternal morbidities. Various fetal complications are premature baby, low birth weight, intrauterine death, congenital malformation and birth asphyxia. Placental abruption is the strongest known trigger of spontaneous preterm labour and PROM both leading to excessively high rates of preterm birth.

APH is a major cause of maternal and perinatal morbidity and mortality which could be prevented by early registration, regular antenatal care, early detection of high risk cases, early referral to higher centre.⁴

Therefore the study was planned to study the maternal and perinatal outcomes in patients of abruption placenta.

Aims & Objectives:-

To evaluate maternal and perinatal outcome in pregnancies with Abruption placenta.

Material & Methods:-

The present study was conducted in the department of obstetrics and gynaecology, SMGS, Hospital, Govt. Medical College Jammu over a period of 1 year.

A prospective study was undertaken.

Inclusion Criteria:-

All case of Abruption placenta \geq 28 weeks of gestational age.

Exclusion Criteria:-

1. All Cases of APH < 28 weeks.
2. The cases of antepartum haemorrhage with the clinical finding and ultrasound report of placenta previa were excluded.

68 patients satisfied above inclusion criteria. There were 2 twin pregnancies in the study group.

The patients were evaluated with detailed history taking and general, systemic and obstetrical examination.

In per speculum examination confirmation of bleeding through Os were noted as to excluded any bleeding from local injury/lesion or trauma.

Management of the patient was done according to standard guidelines, maternal status at the time of admission & foetal status as immediate delivery, induction, caesarean section, conservative or expectant management.

Maternal and perinatal outcome were noted. Mode of delivery and birth weight of foetus were noted. Patient and neonates were followed till discharge from hospital. Observation were tabulated & analysed.

Results & Observations:-

The total number of deliveries in one our hospital were 18567 during the study period 364 patients admitted with antepartum Heamorrhage So the incidence of APH in our hospital was 1.96%. Out of 364 patients, 68 were that of Abruption Placenta, who fulfilled the inclusion criteria.

It was observed that maximum cases of Abruption Placenta i.e 45.59 % were in 20-25yrs of age group. Most of cases of Abruption Placenta (67.65%) were multigravida and 11.77% were grand multipara. (Table 1)

Table 1:- Distribution according to Age & Gravidity.

Age (in years)	No. Of patients	Percentage	Gravidity	No. Of patients	Percentage

<20	0	0	1	22	32.35
20-25	31	45.59	2	28	41.18
26-30	17	25	3	6	8.82
31-35	20	29.41	≥4	12	17.65
>35	0	0	-	-	-

41.47% of cases of Abruptio Placenta had hypertension. 4.41 % had Polyhydramnios and about 39.70% cases of Abruptio Placenta had no associated risk factor . Most of cases i.e. 85.29% had mild bleeding at presentation only 2.9% (2/68) had severe bleeding at presentation. (Table 2)

Table 2:- Distribution according to risk factors.

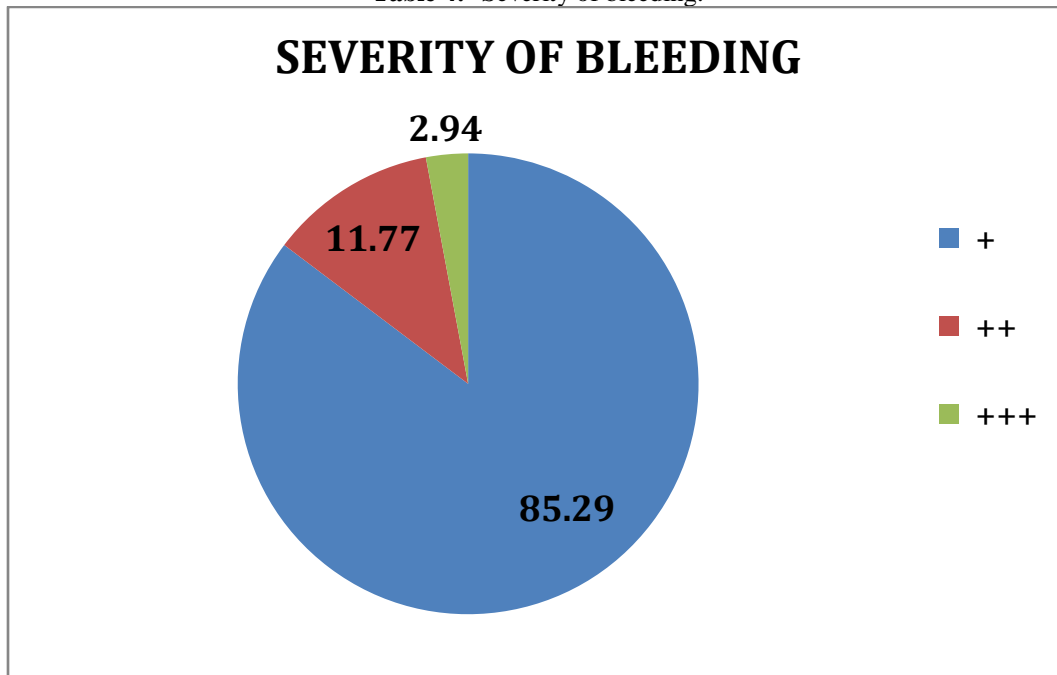
High Risk	No. Of patients	Percentage
Hypertension	28	41.18
GDM	1	1.47
Grandmultipara	8	11.77
Oligohydromnios	1	1.47
Hypothyroid	0	0
Polyhydromnios	3	4.41
Anemia	64	94.12
Twins	2	2.94
None	25	36.76

Table 3:- Mode of Delivery.

Mode of Delivery	No. Of patients	Percentage
LSCS	26	38.24
Vaginal	42	61.76

61.76% delivered vaginally, where as 38.23% had caesarean section. Table 3)

Table 4:- Severity of bleeding.



23.53% patients had postpartum haemorrhage whereas only 2.98% had undergone Postpartum Hysterectomy . Majority of patients i.e. 70.58% (48/68) had no intrapartum or postpartum Complication. DIC was seen in 7.35% cases and shock was seen in 14.70% of cases.

83.82% (57/68) patients Abruptio Placenta needed blood transfusion including FFP's or platelets.

Table 5:- Maternal complications.

Maternal complications	No. Of patients	Percentage
DIC	5	7.35
PPH	16	23.53
Peripartum hysterectomy	2	2.94
Shock	10	14.71
Expired	4	5.88
None	49	72.06

The most common fetal complication in Abruptio Placenta was prematurity (35.71%). IUD was seen in 20% of cases and neonatal mortality was 28.57%. Jaundice was observed in 7.14% whereas 31.42% had no foetal complications.

Majority of neonates 58.58% had APGAR score of above 7, while 24.28% had APGAR score of less than 3 and 17.14% presented with APGAR score between 4 and 7. 44.28% had birth weight between 2.5-3.9 Kg whereas 52.85% had low birth weight (< 2.5kg) mainly due to prematurity). Only 37.14% presented with foetal distress, where as 57.14% had NICU admission the main reason for NICU Admission was preterm delivery. {Table 6}

Table 6:- Perinatal complications.

Foetal complications	No. Of Newborns (N=70)	Percentage
Expired	20	28.57
IUD	14	20
Jaundice	5	7.14
Fetal distress	26	37.14
Preterm	25	35.71
Low APGAR score (<7)	29	41.43
Low birth weight (<2.5 kg)	37	52.86
NICU admission	40	57.14
None	22	31.43

5.89% patients Abruptio Placentas died during Peripartum period out of which 50% (2/4) died due to shock secondary to massive bleeding. Perinatal mortality in Abruptio Placenta was high nearly half (48.57%) of foetal expired in cases of Abruptio Placenta.

Discussion:-

The present study was conducted in SMGS Hospital, GMC Jammu to determine the maternal and perinatal outcome in patients with Abruptio Placenta during one year period .

In our study, 32.35% cases of Abruptio Placenta were primigravida and 67.65% were multigravida, which is consistent with the findings of Signal S.et al.⁵ who found 63.01% of patients in his study to be multigravida and 26.94% primigravida. Siddiqui SA et al. also found that majority of patient of Abruptio Placenta were multigravida.⁶ So being a problem of multiparity, reduction of family size and issue of contraception are highly applicable to reduced the incidence associated with morbidity & mortality.

Mean gestational Age at delivery was 34.40±3.87 weeks in Abruptio Placenta in a study conducted by Siddique SA et al.(2011) similar to 34.88 ±3.41 weeks in our study.⁶

Abruptio Placenta contributed to 28.90% of cases of Antepartum haemorrhage in our study, which was consistent with the study conducted by Adekanle D et al (2011) in which the incidence of Abruptio Placenta was 33.3%.⁷ Singhal S et al. (2011) reported about 1/3rd (29.65%) of women had Abruptio Placenta in his study.⁵ The results of Maurya A et al (2013) were inconsistent with our study in which incidence contribution of Abruptio Placenta was 71%.⁴

Hypertension was noted in 41.17% cases of in our study. About 39.70% of cases of APH had no associated risk factors. Bhandiwad A. Et al. found that hypertension was associated with 16.9% cases of Abruptio Placenta in their study.⁸

61.76% of cases of Abruptio Placenta deliver vaginally whereas 38.23% underwent caesarean section in our study i.e. lower than the reported high caesarean section rate (57.1%) in study by Sheikh F. Et al.⁹ This incidence of caesarean section was due to indications including haemorrhage shock, foetal distress or Malpresentation.

In our study majority of Abruptio Placenta cases (70.58%) had no maternal complications. DIC was seen in 7.35% of cases of Abruptio Placenta, consistent with finding of Bhandiwad A et al. who found 7.5% incidence of DIC among Abruptio Placenta patients.⁸ 52.85% had low birth weight (<2.5) in our study consistent to those of Chufamo N et al. who found the prevalence of LBW among all birth was 35%.¹⁰ 58.58% had APGAR score at birth above 7 while 24.28% had score less than 4 our finding were inconsistent with study conducted by Adenvemle D et al. who found 38.9% cases had low APGAR score. In our study 37.14% cases of Abruptio Placenta had foetal distress at the time of admission Taylor F et al. Reported 69% foetal distress in their study.¹¹

In our study maternal mortality in Abruptio Placenta was 5.89%. Hypovolemic shock secondary to massive bleeding and coagulation disorder from severe bleeding were the two major contributors to maternal mortality. Some patients reported very late so there was very short window of opportunity for active interventions to recorded maternal mortality. It is consistent with maternal mortality of 3.7% reported by Maurya A et al.⁴ In Abruptio Placenta, perinatal mortality was observed in 48.57% in our study. Most common causes were prematurity related complications inconsistent with 18.5% of mortality stated by Maurya A et al. and consistent to the finding of study by Siddique SA et al. conducted in civil Hospital, Karachi who found high Still birth and perinatal mortality rate in Abruptio Placenta i.e 52.97%.

Conclusion:-

Abruptio placenta is associated with significant maternal and perinatal morbidity and mortality. Good regular antenatal care and availability of emergency medical services remains the backbone for the good maternal and perinatal outcome.

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