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Study Of Incidence, Risk Factors And Complications Of Abruptio Placentae In Rural Population In Maharashtra, India.

Pramod Rajaram Gade[1], Razia Nisar Shaikh[2]*, Gautam S Aher[3], and Mayuri D Pawar[4].

[1]Assistant Professor, Department of OBGY, DVVPF'S Medical College, Ahmednagar, Maharashtra, India.
[2]Associate Professor, Department of OBGY, DVVPF'S Medical College, Ahmednagar, Maharashtra, India.
[3]Professor and HOD of the Department of Obstetrics and Gynaecology DVVPF's Medical College and Hospital, Ahmednagar, Maharashtra, India.
[4]Junior Resident, Department of Obstetrics and Gynaecology DVVPF's Medical College and Hospital, Ahmednagar, Maharashtra, India.

ABSTRACT

Placental abruption is one of the most common causes of bleeding during pregnancy. Multiple factors are known to increase the risk of placental abruption. Present study work was carried out in our department for one year duration. We screened 1250 patients in the study. The sample size was estimated with the help of expert. We included randomly, patients visited to OPD. The non willing patients were excluded from present study. Over same period, out of all delivered women, 24 patients were diagnosed and treated for Abruptio placentae. In our study, incidence of abruptio placentae was found 1.92 % (24 patients in 1250) Majority of cases (55%) of abruption were with pregnancy duration of more than 37 weeks. Maximum patients (41%) were in range of age group 21 to 25 years. Multigravida was 71% while primi were 29% patients. Pain in abdomen (75%) and per vaginal bleeding (92%) was of the commonest presenting symptoms, loss or less fetal movements on admission was also the complaint in patients. Anaemia and hypertension has found highest association with abruption, respectively 82% and 60%. While PIH , PROM , trauma , eclampsia were 46% , 15% and 4 % each. The results show that placental abruption is one of the most common causes of bleeding during pregnancy and one of the main obstetric emergencies. Anemia is very common in the study population and therefore may only be an associated factor. The clinical appearance of pallor suggests blood loss rather than hemoglobin, which may be normal due to hemoconcentration.

Keywords: Abruptio placentae, antepartum hemorrhage, gestational hypertension, perinatal mortality

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Corresponding author

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INTRODUCTION

Placental abruption is one of the most common causes of bleeding during pregnancy. Multiple factors are known to increase the risk of placental abruption. The aim of this study was to identify risk factors for placental abruption in a population of Indian women, particularly in rural areas. Placental abruption is the most common cause of late pregnancy bleeding [1,2]. Placental abruption usually presents as a combination of vaginal bleeding, uterine contractions, and pain [3]. Perinatal mortality varies between 20 and 67% depending on gestational age, fetal weight and degree of abruption [4]. About half of perinatal deaths due to placental abruption occur in, also making this disorder a major contributor to stillbirth [5]. Maternal complications of placental abruption include hypovolemic shock, DIC, acute renal failure, adult respiratory distress syndrome, multisystem organ failure, and death. With this in mind, we planned the current study.

MATERIALS AND METHODS

Present study work was carried out in our department for one year duration. We screened 1250 patients in the study. The sample size was estimated with the help of expert. We included randomly; patients visited to OPD. The non-willing patients were excluded from present study.

Over same period, out of all delivered women, 24 patients were diagnosed and treated for Abruptio placentae.

All women coming to hospital with pregnancy more than 28 weeks and having clinical features suggestive of abruptio placentae were included in the study. All cases were admitted in critical care unit of maternal ward. A detailed history of patients were noted down. All of them were examined and investigated with help of proforma.

Study design

Hospital based prospective observational study.

Study population

Antenatal patients clinically diagnosed as case of abruptio placenta during the study period.

Inclusion criteria

All antenatal patients above 20 weeks gestation diagnosed as case of abruptio placentae**.**

Exclusion criteria

All antenatal patients with bleeding per vaginum due to causes other than abruptio placentae.

RESULTS

In our study, incidence of abruptio placentae was found 1.92 % (24 patients in 1250)

Table 1: Distribution of cases as per duration of pregnancy

Duration in weeks	Patients number (N=24)	Percentage (%)
28 to 37	11	45
More than 37	14	55

Majority of cases (55%) of abruption were with pregnancy duration of more than 37 weeks.

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Table 2: Age wise distribution of patients

Age (year)	Patients number (N=24)	Percentage (%)
< 20	4	16
21 to 25	10	41
26 to 30	4	16
31 to 35	4	16
36 and above	2	11

Maximum patients (41%) were in range of age group 21 to 25 years.

Table 3: Distribution of cases as per parity

Gravida distribution	Patients number (N=24)	Percentage (%)
Primi para	7	29
Multipara	15	71

Multigravida were 71% while primi were 29% patients.

Table 4: Distribution of cases – Clinical presentation

Clinical presentation	Patients number (N=24)	Percentage (%)
PV bleeding	22	92
No fetal movements	11	42
Less fetal movements	9	38
Pain in abdomen	18	75
Oedema	7	29
Headache	10	41
Vomiting	6	25

Pain in abdomen (75%) and per vaginal bleeding (92%) was of the commonest presenting symptoms, loss or less fetal movements on admission was also the complaint in patients.

Table 5: Distribution of cases – Associated risk factors

Associated risk factors	Patients number (N=24)	Percentage (%)
Anaemia	20	82
PIH	12	46
Hypertension	15	60
PROM	4	15
Trauma	1	4
Eclampsia	1	4
Breech presentation	0	0

Anaemia and hypertension have found highest association with abruption, respectively 82% and 60%. While PIH, PROM, trauma, eclampsia was 46%, 15% and 4 % each.

DISCUSSION

Abruptio placentae is defined as the premature separation of a normally implanted placenta before delivery, after 20 weeks of pregnancy. Abruptio placentae (AP), which is a major cause of maternal morbidity and perinatal mortality worldwide, is of serious concern in the developing world. Considering the risk factors of placenta prematurity can be attributed to differences in socio-cultural and economic background as well as the effectiveness of the health system to perform effective preventive treatment in

this area; potential determinants of risk factors for placenta prematurity will need to be investigated. Therefore, the aim of this study was to determine risk factors for placental abruption. Anemia is very common in our study population and therefore may only be an associated factor. The clinical appearance of pallor suggests blood loss rather than hemoglobin, which may be normal due to hemoconcentration.

Although anemia is reported to be an important causative factor for abruptio placentae, it is very difficult to comment on its relationship as a causative factor for abruptio because most of the cases were unreported and we were not aware of their previous status of hemoglobin levels. Low hemoglobin levels on admission may be attributed to acute blood loss due to abruption. In this study, multiple vitamin deficiencies and nutritional deficits in almost all patients prevented any single factor from being conclusively studied.

In our study, incidence of abruptio placentae was found 1.92 % (24 patients in 1250) Majority of cases (55%) of abruption were with pregnancy duration of more than 37 weeks. Maximum patients (41%) were in range of age group 21 to 25 years. Multigravida were 71% while primi were 29% patients. Pain in abdomen (75%) and per vaginal bleeding (92%) was of the commonest presenting symptoms, loss or less fetal movements on admission was also the complaint in patients. Anaemia and hypertension has found highest association with abruption, respectively 82% and 60%. While PIH, PROM, trauma, eclampsia was 46%, 15% and 4 % each.

Mukherjee S reported that the 4.4% incidence of AP observed in his study is much higher than the 0.5-1% incidence of AP reported in the US, Europe and East Asia. The higher incidence of AP in this study may be due to lower socioeconomic strata with concomitant poor nutritional status of patients attending a tertiary referral public hospital and is consistent with similar studies reported from other developing countries [6].

Ritu Mishra et al reported, maximum no. cases (40%) of abruptio placenta were between 30 and 35 years. Increased maternal age is a risk factor for placental abruption (Table 1). The maximum number of cases was Gravida 2 (35%) (Table 2). The chances of abruptio placenta increase with increasing parity. Patients who had severe preeclampsia have the highest rate of abruption (75%) (Table 3). Most of them were associated with anemia and PIH. 10% of patients with eclampsia had placental abruption. Even the normotensive groups had an abruption that was about 15%. 75% had a live birth, 25% stillborn (table 4). Of these, 5 died in the early neonatal period as a result of prematurity. Fetal complications included hypoxia, anemia, growth restriction, prematurity, neurodevelopmental problems, prematurity, and fetal death. Maternal complications associated with abruption were postpartum hemorrhage (PPH) (30%), disseminated intravascular coagulation (DIC) (25%), acute renal failure (ARF) (13%), shock (12%). 10% of patients had infections and 10% suffered from another complication [7].

Mitra N et al reported the incidence of abruptio placenta to be 1.6%. It was found 1.8 times more often in multigravid patients than in primigravid patients. The incidence was found to be much higher in patients with PIH, pre-eclampsia and eclampsia (4.35%). [8]The association between maternal smoking and placental abruption has been well documented, and in our study, 9.6% of patients were smokers. The incidence of abruptio placentae was 2.3% in multifetal pregnancies, which is 1.43 times higher than in the general population. Preterm births showed an increased incidence of abruptio placentae. Infant mortality in our study was 52.05%. This study pointed out that the main risk factors for abruptio placentae are high parity, younger age, PIH, pre-eclampsia, eclampsia, multifetal pregnancy and smoking. Proper prenatal care, proper booking, screening for high risk factors, early referral are the various pillars that need to be strengthened in our population to reduce the incidence and complications arising from this disaster [8, 9].

CONCLUSION

The results show that placental abruption is one of the most common causes of bleeding during pregnancy and one of the main obstetric emergencies. Anemia is very common in the study population and therefore may only be an associated factor. The clinical appearance of pallor suggests blood loss rather than hemoglobin, which may be normal due to hemoconcentration.

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