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EVALUATION OF RISK FACTORS FOR PRENATAL AND MATERNAL OUTCOME IN ABRUPTION OF PLACENTA IN AN OBSTETRICS AND GYNAECOLOGY DEPARTMENT AT RIMS, KADAPA

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ABSTRACT

Objective: To evaluate the risk factors and to find out the maternal and perinatal outcome in obstetric patients with abruption placenta. **Study Design:** Retrospective observational study. **Materials and Methods:** In present study from January 2013 to January 2015 with abruption placenta in 3rd trimester were included. A detailed history was obtained and maternal high risk factors were noted. Examination, investigation and detail of intrapartum, postpartum and associated complications were recorded. **Results:** Incidence of abruption placenta was 0.3% with commonest age group being 20 to 25 years .risk factors with anemia (67.3 %), pregnancy induced hypertension (76%), eclampsia (9%), chronic hypertension (3%), gestational diabetes (9%), polyhydramnios (5%), PROM (23%). Delivered vaginally (55.7%) and caesarean section (30.7%). Maternal complications were PPH (53.8%), DIC (5%), acute renal failure (7.6%), puerperal sepsis (11.5%) were noted. No maternal mortality was noted. 28.8 % women delivered live babies. 59.5% women came with intra uterine death. 13.4% were still born. Out of these term deliveries are 46.1% and pre term deliveries are 53.8%, in these live births, 9 died in early neonatal period due to prematurity. **Conclusion:** Placental abruption is an independent risk factor for perinatal mortality. Therefore, risk factors should be carefully evaluated to improve outcome.

KEYWORDS: Abruptio Placenta, Maternal Outcome, Perinatal Outcome, Risk Factors.

INTRODUCTION

Placental abruption was a bleeding after premature separation of a normally situated placenta. The detached portion of the placenta is unable to exchange gases and nutrients; when the remaining fetoplacental unit is unable to compensate for this loss of function, the fetus becomes compromised. Placental abruption complicates 52 numbers of pregnancies.[1,2] The incidence appears to be increasing, possibly due to increase in the prevalence of the risk factors for the disorder. Primary cause of abruption is not known but the main precipitating and predisposing factors of abruption are age, parity, anaemia, pregnancy induced hypertension (PIH), eclampsia, gestational diabetes mellitus(GDM), premature rupture of membranes(PROM),previous medical termination of pregnancies (MTP), Lower segment caesarian section (LSCS) are most common associated risk factors.[3,4] Although even minor trauma may be associated with an increased risk of preterm birth, severe maternal trauma is associated with a 6 fold increase of abruption. Abruption is a significant cause of maternal and perinatal morbidity and perinatal mortality.[5,6] The majority perinatal deaths (72.3%) occur in utero, deaths in the postnatal are primarily related to preterm delivery. The aim of present study was to determine the risk factors for the abruptio placenta together with the maternal and fetal outcome.

MATERIAL AND METHODS

Present study was conducted in the Department of Obstetrics and Gynecology at RIMS, KADAPA for 2 years (from January 2013 to January 2015). It is retrospective observational study conducted on 52 pregnant women who were in 3rd trimester with placental abruption. All cases of antepartum hemorrhage (APH) like placenta preview extra placental indeterminate causes other than abruption were excluded. Detailed obstetric history was obtained and maternal high risk factors like PIH, GDM, ployhydramnios etc, were noted. As 95% patients were admitted as emergency, placenta abruption were suspected depending on clinical features of vaginal bleeding, uterine tenderness, hypertonic uterus

and diagnosis was confirmed by presence of retro placental clots. After initial resuscitation, mode of delivery was decided depending on state of mother and fetus. Fetal well being was assessed with ultrasonography and cardiotocography.[7,8] Maternal outcome measures were followed for mortality and morbidity which can be due to hemorrhagic shock, DIC, ARF, PPH, puerperal sepsis and postoperative mechanical ventilation. Fetal outcome studied were perinal mortality (stillborn and neonatal deaths), intra uterine growth restriction (IUGR), prematurity, APGAR score, birth weight, admission to neonatal intensive care unit (NICU). All information was gathered.[9, 10, 11, 12] Results were analyzed by using appropriate statistical analysis method was done. Chi-square test [p value < 0.05] was considered as significant.

RESULTS

The total number of deliveries during the study period was 14675. Patients with abruption placenta were 52, giving an incidence of 0.312%.

TABLE-1 DISTRIBUTION ACCORDING TO DEMOGRAPHIC PROFILE

S.No	Parameters	Number of Patients (n=52)		Percentage (%)
1	ANC status*	Booked Unbooked	11 41	21% 79%
2	Age	20-25 26-30 31-35	36 11 5	69% 21% 9%
3	Parity	Primi Multipara Grandmultipara	11 31 10	21% 59% 19%
4	Gestational age	>37 weeks <37 weeks	24 28	46.1% 53.8%

*Significant p value <0.05.

Majority of patients were unbooked. Majority (69%) of women was between 20-25 years of age group and maximum were multipara.[13, 14, 15] Mainly abruption was seen in women preterm 53.8%.

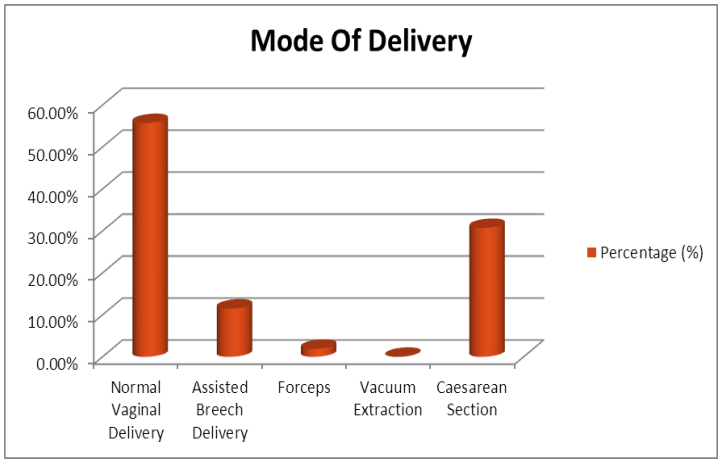
TABLE-2 DISTRIBUTION OF RISK FACTORS FOR ABRUPTION PLACENTA

S.No	Risk Factors	Number Of Patients (n=52)		Percentage (%)
1.	Medical Disorder	Anaemia PIH Eclampsia Chronic Hypertension Diabetes	35 40 5 1 2	67.3% 76% 9% 3% 3.8%
2.	Polyhydramnios		5	9%
3.	PROM		12	23%
4.	Trauma		0	0%
5.	H/O Tobacco Chewing		33	63%
6	Prior Abruption		9	17%
7	Unknown Cause		11	21%

Total of 35(67.3%) women were anemic. PIH was seen in 76%, ployhydramnios in 9%, PROM in 23% and diabetes in 3.8%.[16, 17, 18]

TABLE-3 MODE OF DELIVERY

S.No	Mode Of Delivery	Number Of Patients (n=52)	Percentage (%)
1.	Normal Vaginal Delivery	29	55.7%
2.	Assisted Breech Delivery	6	11.5%
3.	Forceps	1	1.9%
4.	Vacuum Extraction	0	0%
5.	Caesarean Section	16	30.9%



Main indication for LSCS was fetal distress, other were maternal shock, previous LSCS and impending uterine rupture.[18, 19, 20]

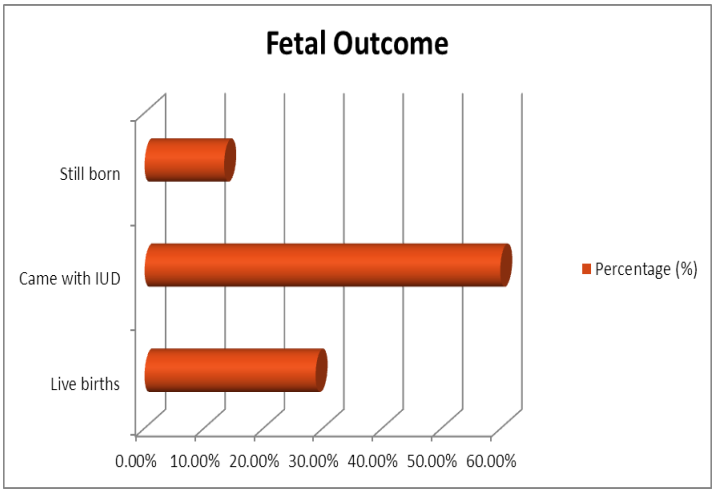
TABLE-4 DISTRIBUTION OF MATERNAL MORBIDITY

S.No	Maternal Complication	Number of Patients (n=52)	Percentage (%)
1.	PPH	28	53.8%
2.	DIC	3	5%
3.	ARF	4	7.6%
4.	Puerperal sepsis	6	11.5%

Major maternal complications seen was postpartum hemorrhage was 53.8% and DIC in 5%. There is no maternal mortality was noted. (28.8%) women delivered live babies while (13.4%) were still born.[20, 21, 22] Out of these 15 live born babies 9 died in early neonatal period due prematurity. Therefore overall perinatal mortality was 73.3%. In 15 live babies 9 had low APGAR score <7 at 5 mins, 7 were premature 8 were IUGR.

TABLE-5 DISTRIBUTION OF FETAL OUTCOME

S.No	Fetal Outcome	Number of Patients (N=52)	Percentage (%)
1.	Live births	15	28.8%
2.	Came with IUD	31	59.9%
3.	Still born	7	13.4%



DISCUSSION

Abruptio placenta remains a major cause of perinatal mortality and morbidity. The incidence of abruption placenta in present study is 0.3% comparable with others 0.5-5%. This is due to contributing factors like ignorance about antenatal care and poor control of predisposing and precipitating factors. Increased incidence is seen in patients belonging to rural areas and unbooked. The same observation is also an evident from other studies. Relation between age, parity and incidence of abruption appears to be varying in different studies. Abruption can occur at any stage in pregnancy but 32-36 weeks appears

most vulnerable period and incidence rates vary considerably depending on the etiology.

This study was conducted in a tertiary care hospital which is situated in rural area. Therefore patients with associated medical disorder were high in our scenario. Majority of patients were anemic. These observations are also seen in other studies. This high frequency of anaemia could be due to predisposing nutritional deficiency and then superimposed by abruption. An association of anemia, diabetes and hypertension with placental abruption was observed in our present study. Altered fetoplacental angiogenesis during early pregnancy in anemic women may partially explain this increased risk. Hypertensive vasculopathy may affect placental vasculature which may succumb to sudden rise in blood pressure. Diabetes can cause the placental dysfunction and causes placental abruption. Tobacco chewing and previous obstetrics history has to be carefully evaluated as damage to the endometrial especially to basalis layer may lead to defective neoangiogenesis in later pregnancies. Therefore, previous LSCS, previous MTP, previous abruption shows significant risk factors for abruption in subsequent pregnancy.

As it is a catastrophic event, mode of delivery has to be carefully selected. Delivery outcome of our study shows that majority of women delivered vaginally, caesarean section being only performed in cases where fetus was alive and shows very severe abruption because patients were at advanced labour.

Among maternal complications PPH was commonest, followed by DIC, puerperal sepsis, shock and renal failure, which is similar to other. There is no maternal mortality was noted. Maternal mortality incidence varies from <1%-8.3%. This can attributed to improved obstetric care, timely interventions and availability of blood and blood components.

Fetal mortality seems to be due to abruption itself, its risk factors as well as the prematurity. This high mortality is comparable with other studies. Perinatal mortality and morbidity can be reduced by identification of risk factors, good antenatal care, improved nutrition, careful vigilance of risk cases and timely decisions.

CONCULSION

Placental abruption is an independent risk factor for perinatal mortality. Since the incidence of placental abruption has increased during the last decade, risk factors should be carefully evaluated to improve outcome. Antenatal services should be provided to all women especially to poor socioeconomic class. Abruption placenta should be managed in centers where there is advanced maternal and neonatal facilities.

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CONFLICT OF INTEREST

The authors have no conflicts of interest.

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