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STUDY OF MATERNAL AND FETAL OUTCOME IN ANTEPARTUM HAEMORRHAGE

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INTRODUCTION

Antepartum hemorrhage (APH) is defined as bleeding from or into the genital tract during pregnancy after the period of viability until delivery of fetus[1]. The World Health Authority defines antepartum hemorrhage as bleeding after 28th week of pregnancy. On an average 2 to 5% of all pregnancies are complicated by antepartum hemorrhage.
Antepartum hemorrhage accounts for about 22-25% of maternal mortality[1].
Causes of antepartum hemorrhage include placenta previa (PP) and placental abruption (AP).
vasa previa, marginal vein bleeding, trauma due to foreign body or genital lacerations and cervical polyp, cervical carcinoma, local lesions of vagina and cervix and systemic diseases like leukemia & bleeding disorders
In Placenta previa, placenta is implanted wholly or partly into the lower segment of the uterus whereas an abruption of placenta is the condition where bleeding occurs due to premature separation of a normally sited placenta[2].
The incidence of placenta previa (PP) is about 0.33% to 0.55% and incidence of abruptio placenta (AP) is about 0.5-1%[1].
Presently increase in use of ultrasound for prompt diagnosis, with improved obstetrical and anesthetic facilities, increase in use of blood and blood products and advanced neonatal care facilities have played an important role in decreasing perinatal as well as maternal morbidity and mortality in antepartum hemorrhage.
APH causes increase in maternal complications like malpresentations, higher rates of caesarean section, premature labor, postpartum hemorrhage, increased need for peripartum hysterectomy, puerperal infections, sepsis,shock, coagulation failure and retained placenta and fetal complications due to APH include prematurity, low birth weight, congenital malformations, birth asphyxia and intrauterine death. All these contribute to increased maternal morbidity and mortality rates.

AIMS & OBJECTIVES OF THE STUDY

- To study the maternal and fetal outcome in Antepartum hemorrhage.
- To study the associated risk factors with Antepartum hemorrhage.

MATERIALS AND METHODS

STUDY DESIGN: Prospective analytical study
STUDY DURATION: 1st November 2019 to 30th April 2021
100 women who came with bleeding P/V after the period of viability were taken into the study. Written informed consent was taken from all women recruited into the study after explaining the nature of the study.
All the patients were included in the study were carefully examined and underwent following investigations:CBP,RFT,LFT, coagulation profile, antenatal scan and Doppler. They were followed throughout their pregnancy as per the antenatal surveillance for risk factors.

To determine the maternal and fetal outcome the patients were observed for the following:

Maternal outcome:
Risk factors
mode of delivery
Blood transfusions
maternal complications like
renal failure
DIC
shock
maternal mortality
Fetal outcome:
prematurity
low birth weight
RDS
Birth asphyxia
neonatal jaundice
NICU admissions
perinatal mortality

INCLUSION CRITERIA:
· All cases of APH with gestational age > 28 weeks
EXCLUSION CRITERIA:
· Any antenatal cases of gestational age < 28 weeks with bleeding PV
· Patient suffering from any other bleeding disorder
· Other non-placental causes of APH.

STATISTICAL ANALYSIS

Data was entered into Microsoft Excel (Windows 7; Version 2007) and analyses were done using the Statistical Package for Social Sciences (SPSS) for Windows software (version 22.0; SPSS Inc, Chicago). Descriptive statistics and variables were determined. Association between variables was analyzed by using Chisquare test for categorical variables. Level of significance was set at 0.05.

RESULTS AND ANALYSIS

Out of 100 APH cases, 62 cases presented with abruptio placenta and 38 cases presented with placenta previa. [Table/Figure 1]

The most common risk factors seen in APH is hypertensive disorder and anemia. Out of these 50% of abruption cases presented with hypertensive disorder and 21% cases of abruption had pre-existing anemia where as 11% of Placenta Previa cases presented with hypertensive disorders and 24% of Placenta Previa cases presented with anemia. Out of 100 cases 100%, [38 cases] of placenta previa are terminated by c-section where as 58.1%% of abruption cases were terminated by c-section. Out of 100 cases 89.4% of placenta previa cases needed blood transfusion with p value -<0.001 which is significant. The most common maternal complications seen in APH were Postpartum hemorrhage , Renal Failure and disseminated intravascular coagulation. PPH is seen in 42.1% cases in placenta previa and in 29% in Abruption placenta. Renal failure is seen in 14.5% cases of abruption and 5.3% cases of Placenta previa whereas DIC is seen in 6.4% cases of abruption. Out of 100 APH cases, 3 maternal deaths were seen.1 death was due to massive acute blood loss in placenta percreta leading to hypovolemic shock.2nd death was due to abruption IUD leading to DIC and septic shock, and 3rd death was due to abruption placenta leading to DIC, hypotension, acute renal shutdown and severe renal cortical necrosis

[Table/figure-2]

This table depicts fetal outcome in APH. Most of the infants were born preterm.p value being-0.12 which is nonsignificant, shows that there is no significance of incidence of preterm with different types of APH .24 babies (63.2%) born to placenta previa mothers were LBW, whereas 40 babies(64.5%) babies born to abruption mothers were LBW. The main reason being prematurity.p value-0.891 which is nonsignificant, shows that there is no significant difference in birth weights of babies born to mothersof placenta previa and abruption.Out of 100 babies,33 babies(53.2%) of
abruption mothers were born with IUD/stillborn, whereas, 1baby(2.6%) of placenta
previa mother was a IUDp value being-<0.001 which is significant, shows that incidence of IUD/stillbirth is significantly more in abruption compared to placenta previa.[Table/Figure-3]

This table depicts neonatal morbidity and mortality of babies born to APH mothers.6% of babies were born with birth asphyxia, 11% babies developed neonatal jaundice and 8% babies had respiratory distress syndrome. 5% babies died in NICU whereas, 36% babies were on mother side[Table/Figure-4]

DISCUSSION

Antepartum hemorrhage is an important cause of maternal and perinatal morbidity and mortality in the world. The present study was conducted to assess maternal and fetal outcome in patients with antepartum hemorrhage, and to study the associated risk factors with antepartum hemorrhage. 100 antenatal women who came with bleeding p/v after 28 weeks were taken in the study after taking consent.

APH

In the present study, causes of antepartum hemorrhage were noted. Theincidence of placenta previa was 38% cases and incidence of abruption placenta was 62% cases.According to studies conducted by Takai et al[3] incidence of placenta previa was 30% and abruption was 68.3% similar studies by Bhandiwad et al[4] showed incidence of abruption in 57.5% and placenta previa in 25% and study by Jaju et al[5] showed incidence of abruption in 68.2% and placenta previa in 31.8% cases.

MODE OF DELIVERY

In our study, 64% cases were delivered by caesarean section. Caesarean rates were 77% and 89% in studies conducted by Chand et al[6] and Tyagi et al[7]respectively. Rates of caesarean hysterectomy was 8% in our study which is similar to study conducted by Tyagi et al[7] where the rate was 7% and Nasreen et al[8], the rate of hysterectomy was 5% and study by Zakherah et al[9] shows 11.3%.

BLOOD TRANSFUSION

In present study, 69% of APH cases needed blood transfusion .Out of which 53.2% cases of abruption and 89.4% of placenta previa needed blood transfusion, which is similar to study conducted by Ayushma et al[10] in which 66.7% cases required blood transfusion and Takai et al[3] in which 61.5% cases were given transfusion.

FETAL OUTCOME

In present study, 26% fetus presented with malpresentation like breech, transverse or unstable lie. This is more commonly seen in placenta previa. This is similar to Mauryaet al[11] study in which 25.4% fetus presented with malpresentation and Raksha et al[12] found abnormal presentations in 25% cases. In present study, 67% babies were born preterm which is similar to

study conducted by Lakshmipriyaet al[13] and Wasnik et al[14]studies in which 69% and 65% babies were born preterm respectively. In present study,64% of babies were born with low birth weight. Out of these 40% babies were born to abruption cases and 24% of babies were born to placenta previa cases. This is similar to study conducted by Chand et al[6] in which low birth weight was seen in 61.7%, out of these 47.3% were seen in placenta previa cases and 13.39% seen in abruption babies. Study by Samal et al[15] also showed low birth weight of 66.5%.In present study, perinatal mortality is seen in 39% cases. The causes being high incidence of IUD and still births and also neonatal morbidity like birth asphyxia, respiratory distress syndrome and prematurity leading to neonatal death. This is similar to study conducted by Tyagiet al[7],Rathi et al[16]and Chand et al[6]. In present study, 3 maternal deaths were seen. Out of these, 1 was due to placenta previa and 2 deaths were due to abruption leading to DIC and shock. Study by Tyagi et al[7] showed 6% mortality, Maurya et al[11] showed 4.23% mortality and Rathi et al[16] showed 3% maternal mortality. The main reason of maternal mortality is delayed referral.

CONCLUSION

Antepartum hemorrhage is a major contributor in obstetrical hemorrhage. The incidence of abruptio placentae compared to placenta previa is high. Abruptio placenta carries a poor fetal prognosis as majority present with IUD. Awareness of pregnant women about the importance of regular antenatal checkups and easy accessibility to antenatal services go a long way in bringing down the maternal and perinatal morbidity and mortality related with APH. The morbidity associated with placenta previa can be reduced by detecting the condition of placenta in antenatal period by ultrasound and also the correction of anemia during antenatal period. Intensive family planning programs helps in decreasing the cases of APH in relation with age and parity. Efforts should be made to reduce the rate of unnecessary abortion, septic abortions, operative deliveries, because there is greater likelihood of placenta previa in scarred uterus. From present study it can be concluded that APH is still a leading cause of maternal morbidity and mortality in our country. Good regular ANC and availability of medical services remains the backbone for the good maternal and perinatal outcome in APH.

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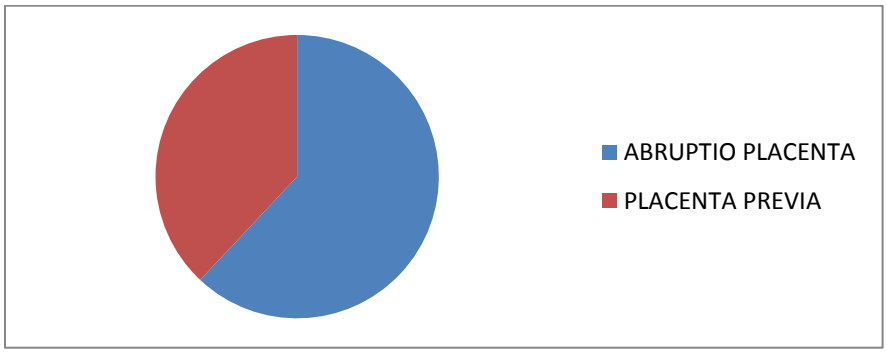

Table/Figure 1 – Pie diagram showing distribution of cases of APH.

		PLACENTA PREVIA	ABRUPTIO PLACENTA	P Value
RISK FACTORS	HYPERTENSION ANEMIA	4[11%] 9[24%]	31[50%] 13[21%]	<0.001 0.75
MODE OF TERMINATION	VAGINAL C-SECTION	0[0%] 38[100%]	36[58.1%] 26[41.9%]	
BLOOD TRANSFUSION		34[89.4%]	33[53.2%]	<0.001
MATERNAL COMPLICATIONS	PPH RENAL FAILURE DIC	16[42.1%] 2[5.3%] 0	18[19%] 9[14.5%] 4[6.4%]	
		2[0.02%]	1[0.01%]	

MATERNAL MORTALITY				

Table/Figure-2 . Table showing maternal risk factors and outcome of APH

		PLACENTA PREVIA	ABRUPTIO PLACENTA	p value
TERM/PRETERM	TERM	20(52.6%)	37(59.7%)	0.12
	PRETERM	18(47.4%)	25(40.3%)	
BIRTH WEIGHT	<2.5KG	24(63.2%)	40(64.5%)	0.891
	>2.5KG	14(36.8%)	20(35.5%)	
OUTCOME	ALIVE	37(97.4%)	29(46.8%)	<0.001
	IUD/STILLBIRTH	1(2.6%)	33(53.2%)	

Table/Figure-3 . Table showing fetal outcome in APH

NEONATAL MORBIDITY	**PREVALANCE**	**FREQUENCY**
BIRTH ASPHYXIA	**6**	**6**
RESPIRATORY DISTRESS SYNDROME	**8**	**8**
NEONATAL JAUNDICE	**11**	**11**
NEONATAL DEATH	**5**	**5**

Table/Figure-4 Table showing Neonatal Morbidity and Mortality