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Original Research Article

Study on fetomaternal outcome in antepartum haemorrhage

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ABSTRACT

Background: Any bleeding from or into the genital tract after the period of viability, but before the birth of the baby is termed as antepartum haemorrhage (APH).
Methods: 110 cases of bleeding per vaginal (pv) after 28 weeks of gestation were studied retrospectively from August 2018 to June 2019 and were grouped as placenta previa, placental abruption and indeterminate.
Results: 35.45% cases were of placenta previa, 53.63% cases were of placental abruption and 10.90% cases were of indeterminate. Majority were delivered by lower segment caesarean section (LSCS) and most of the cases required blood transfusion.
Conclusions: APH cannot reliably be predicted .It is major cause of maternal and perinatal mortality and morbidity. Multidisciplinary approach and senior input is necessary in making decision about timing and mode of delivery. Presently increase in use of ultrasonography (USG) for placental localisation and to diagnose abruption, improved obstetrical and anesthetic facilities, increase in use in blood products to correct anemia and advanced neonatal care facilities, all of these have played important role in decreasing perinatal as well as maternal mortality and morbidity.

Keywords: Placenta previa, Placental abruption, Antepartum haemorrhage

INTRODUCTION

Antepartum haemorrhage (APH) has always been one of the most feared complications in obstetrics.

APH is defined as any bleeding from or into the genital tract after the period of viability, but before the birth of the baby.1 On an average 2 to 5% of all pregnancies are complicated by antepartum haemorrhage.[1,2]

The main cause of APH is placenta previa and abruption placentae. In a small proportion where placenta previa and abruption have been excluded, the cause may related to local lesions of the cervix and vagina, e.g. cervicitis, cervical erosion, genital tumours, vaginal varicosities, rupture of vasa previa and heavy show. The prevalence is approximately 0.5% of all pregnancies, and this increase correlates to the elevated cesarean section rate.[3]

Abruption is more likely to be related to condition occurring during pregnancy (preeclampsia, abdominal trauma, intrauterine infections, premature rupture of membranes, polyhydroamnios, smoking and substance abuse) and placenta previa related to condition existing prior to the pregnancy (uterine scar manual removal of placenta, curettage, advanced maternal age, multiparity and previous placenta previa).

The maternal complications in patients with APH are malpresentations, preterm labour, postpartum haemorrhage, septic, shock and retained placenta. Various fetal complications are preterm birth, low birth weight, intrauterine death, congenital malformations and birth asphyxia.

In developing countries, wide spread pre-exisitng anemia, difficulties with transport, restricted medical facilities,

decrease awareness in part of patients are responsible for high maternal mortality rate (MMR). Obstetrical haemorrhage along with hypertension and infections is one of the infamous triad of causes of maternal death in both developed and developing country. Prompt diagnosis, resuscitation and management are essential to save the mother and the fetus.

Objective of the study were to study the prevalence of APH at tertiary care hospital, to assess the importance of early diagnosis and treatment, to study the maternal and fetal outcome in APH and to study the associated risk factor contributing to maternal and fetal morbidity and mortality.

METHODS

A retrospective study was conducted from August 2018 to June 2019 at tertiary care centre.110 cases of bleeding per vaginal (pv) after 28th weeks of gestation were studied for fetomaternal outcome. Informed consent was taken from all patients.

Inclusion criteria

Any bleeding from or into the genital tract after 28th week of pregnancy and before birth of baby.

Exclusion criteria

Patient with bleeding due to any another cause (bleeding disorder).

Antenatal patients with bleeding pv less than 28th week of gestation.

Source of bleeding other than uterus.

Female fulfilling the above criteria were included in study. Detailed history was taken and clinical examination was done, including general examination, per abdominal examination, per speculum examination and pv examination (when required). Basic obstetrics ultrasound was done to know fetal well-being, gestational age, amniotic fluid and most importantly for localization of placenta and to see any blood collection behind the placenta. Various blood and other investigations were carried out like complete blood count, coagulation profile, renal function test, liver function test, lactate dehydrogenase (LDH), uric acid, and urine albumin. Subsequent management was done according to the type of APH (i.e. placenta previa, and abruption placentae), severity and type of bleeding and gestational age.

RESULTS

110 cases of APH were analyzed in which 35.45% cases were of placenta previa, 53.63% cases were of abruptio placentae and 10.90% were indeterminate.

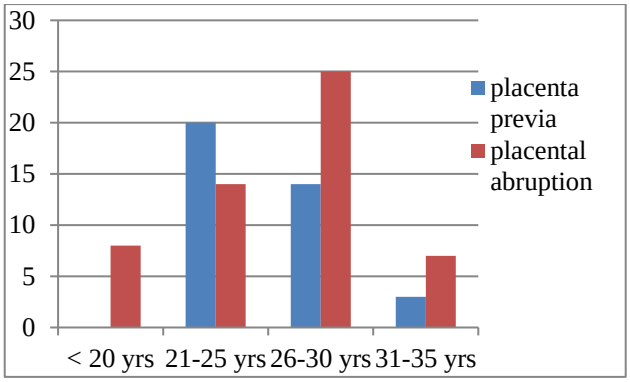

Figure 1: Age distribution.

Table 1: Gravida distribution.

Distribution	Placenta previa (n=39)	Abruption placentae (n=59)
Primi	8 (20.51)	20 (33.89)
Gravida 2	12 (30.76)	11 (18.64)
Gravida 3	11 (28.20)	14 (23.72)
Gravida 4	6 (15.38)	7 (11.86)
Gravida 5 or more	3 (7.69)	4 (6.77)

Table 2: PIH and antepartum haemorrhage.

	Placenta previa (n=39)	Placental abruption (n=59)
PIH	2 (5.12)	21 (35.59)

In current study it was found that pregnancy-induced hypertension (PIH) was more associated with placental abruption rather than that of placenta previa.

Table 3: Mode of delivery.

Mode of delivery	Placenta previa (n=39)	Placental abruption (n=59)
LSCS	39 (100)	38 (64.40)
Normal delivery	0	21 (35.59)

During current study it was also found that no cases of placenta previa were delivered vaginally, while in cases of placenta abruption rate was of normal vaginal delivery was of 35.59% (21 case).

Table 4: Maternal complications.

Complica-tions	Placenta previa (n=39)	Placental abruption (n=59)
PPH	10 (25.64)	11 (18.64)
DIC	4 (10.25)	10 (16.94)
ARF	1 (2.56)	7 (11.86)
Couvelaire uterus	0	8 (13.55)

Table 5: Per operative intervention.

Per operative intervention	Placenta previa (n=39)	Placental abruption (n=59)
Blood transfusion	33 (84.61)	45 (76.27)
B/L uterine artery ligation	9 (23.07)	12 (20.33)
Caesarean hysterectomy	5 (12.82)	0

Table 6: Perinatal and neonatal outcome in antepartum haemorrhage.

Outcome	Placenta previa (n=39)	Placental abruption (n=59)
Preterm	34 (87.17)	40 (67.79)
Term	6 (15.38)	17 (28.81)
Low birth weight	25 (64.10)	21 (35.59)
IUD	3 (7.69)	16 (27.11)
Neonatal death	3 (7.69)	3 (5.08)
NICU admission	11 (28.20)	14 (23.72)

Table 7: Investigations.

Investigations	Placenta previa (n=39)	Placental abruption (n=59)
Hb (<8)	7 (17.94)	18 (30.50)
Urine albumin (+)	8 (20.51)	24 (40.67)
Prothrombin time (>14)	23 (58.97)	27 (45.76)
Argon plasma coagulation (<1,00,000)	2 (5.12)	5 (8.47)

DISCUSSION

In our study 35.45% cases were of placenta previa and 53.63% cases were of placental abruption, more cases were of placental abruption, however in Maurya et al and Adekanle et al study more cases were of placenta previa.[4,5]

In present study age distribution shows that 35.45% of APH lies between 26-30 years especially placental abruption i.e. 42.37%, which is same as study by Adekanle et al in which 40% APH patients were between 25-29 years of age (Figure 1).[5]

In current study placental abruption was more common in primis as compared to placenta previa (33.89% in placental abruption and 20.51% in placenta previa),also in studies of Arora et al, Pandey et al and Maurya et al study abruption was more in primigravida (Table 1).[4,6,7]

In present study of APH 38.46% cases were of major placenta previa and 61.53% were of minor type of placenta previa, and also in case of placental abruption 18.64% cases had concealed haemorrhage, 25.42% cases had reavealed haemorrhage and 54.23% had mixed type of haemorrhage.

Pregnancy-induced hypertension (PIH) was present in majority cases of placental abruption i.e. 35.59% while only 5.21% cases of placenta previa had PIH, comparable to study done by Tyagi, Yadav, Sinha and Gupta in which 11% cases of placental abruption had PIH (Table 2).[8]

In current study 70% cases of APH were delivered by lower segment cesarian section (LSCS) and 19.09% cases by vaginal route.100% cases of placenta previa were delivered by LSCS, where as in case of placental abruption 64.40% were delivered by LSCS and 35.59% cases by vaginal route. The above result of mode of delivery is comparable to Maurya et al study in which there is 94.3% LSCS rate in APH (Table 3).[4]

In our study PPH was a major intrapartum complication involving 19.09% cases of APH. 25.64% cases of placenta previa and 18.64% cases of placental abruption. DIC was present in 10.25% cases of placenta previa and 16.94% cases of placental abruption, whereas acute renal failure (ARF) was present in 7.27% cases of APH (Table 4).

Blood transfusion was required intraoperatively in 70.90% of total APH patients with 84.61% of placenta previa and 76.27% of placental abruption cases requiring blood transfusion. Bilateral (B/L) uterine ligation was performed in 19.09% cases of APH, 23.07% in placenta previa and 20.33% in placental abruption. Caesarean hysterectomy was performed in 4.54% cases of APH and all were performed in placenta previa, which is similar to the study of Nasreen et al in which incidence was 5% (Table 5).[9]

67.27% cases of APH had preterm delivery, with 87.17% rate in placenta previa and 67.79% rate in placental abruption. Similar results were appreciated in study by Maurya et al in which 52% patients delivered before 37 weeks with majority being cases of placenta previa.[4] Also in our study 22.72% fetus had required neonatal intensive care unit (NICU) admission (28.20% in placenta previa and 23.72% in placental abruption), and 17.27% was intrauterine device (IUD) (7.69% in placenta previa and 27.11% in placental abruption) (Table 6).

In current study 6.36% cases of APH had argon plasma coagulation (APC) less than 1,00,000 out of which 5.12% cases in placenta previa and 8.47% in placental abruption, also in majority cases prthrombin time (PT) >14 sec i.e. 45.45% cases of APH (58.97% in placenta previa and 45.76% in placental abruption) (Table 7).

CONCLUSION

APH cannot reliably be predicted. It is major cause of maternal and perinatal mortality and morbidity. Multidisciplinary approach and senior input is necessary in making decision about timing and mode of delivery.

Presently increase in use of ultrasonography for placental localisation and to diagnose abruption, improved obstetrician and anesthetist facilities, increase in use in blood products to correct anemia and advanced neonatal care facilities, all of these have played important role in decreasing perinatal as well as maternal mortality and morbidity.

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