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Original Research Article

Incidence of antepartum haemorrhage in pregnancy and its maternal-fetal outcome in admitted antenatal patients in tertiary care centre, Bhilai Durg, Chhattisgarh

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ABSTRACT

Background: Antepartum haemorrhage has always been one of the deadliest complications in obstetrics. Antepartum haemorrhage (APH) complicates about 2-5% of pregnancies. Maternal and perinatal morbidity and mortality associated with APH can be reduced significantly by aggressive expectant management. The present study was conducted to assess maternal and fetal outcome in patients with antepartum haemorrhage. Aims and objectives were to study the incidence of antepartum haemorrhage at SSIMS hospital. To highlight the importance of early diagnosis and treatment. To study the maternal and fetal outcome in antepartum haemorrhage. To study the associated risk factors contributing to maternal and fetal morbidity and mortality.

Methods: The study was conducted in Shri Shakaracharya Institute of Medical Sciences, Bhilai, Durg, Chhattisgarh during the period of January 2020 to December 2020 after getting approval from the institutional ethical committee. 31 cases of APH with gestational age ≥ 28 weeks were included. They were distributed according to type of APH into abruptio placentae (AP), placenta previa (PP). Causes of APH were noted and maternal as well as perinatal outcome observed.

Results: In the present study it was observed that incidence of APH was 2% out of 1503 deliveries. Out of 31 cases, 54.83% was AP followed by PP 45.16%. Abruption was the commonest cause of APH with its associated maternal morbidity and perinatal mortality and morbidity. Anemia was the most common complication in APH. Prematurity of the neonate was a serious complicating factor in APH. No maternal mortality was seen in this study.

Conclusions: Overall incidence of APH has remained high. Though maternal morbidity is reduced with modern management of APH, but timely diagnosis and intervention is necessary. Perinatal morbidity can be reduced with good neonatal intensive care facilities.

Keywords: Antepartum haemorrhage, Abruptio placentae, Placenta previa

INTRODUCTION

Antepartum haemorrhage is one of the deadliest complications in obstetrics. Antepartum haemorrhage is still a grave obstetric emergency contributing to a significant amount of maternal and perinatal morbidity and mortality in our country.¹ Antepartum haemorrhage complicates about 2-5% of pregnancies with incidence of placenta previa about 0.33% to 0.55% and incidence of

abruptio placentae about 0.5 to 1%. APH is defined as bleeding from the genital tract from the viability of pregnancy for extrauterine survival to the delivery of the baby.²

The main causes of APH are placenta previa and abruptio placentae; however, the exact cause of bleeding in some cases may be undermined. In a small proportion where placenta previa and abruption have been excluded. The

cause may be related to local lesions of the cervix and vagina, e.g., cervicitis, cervical erosion, genital tumors, vulvar varicosities, ruptured vasa previa, and heavy show.³

The maternal complication in patients with APH are malpresentations, premature labour, PPH, sepsis, shock and retained placenta. Various fetal complication are preterm baby, low birth weight baby, intrauterine death, congenital malformation and birth asphyxia. In developing countries wide spread pre-existing anemia, difficulties with transport, restricted medical facilities, decreased awareness on part of patients are responsible for high MMR. Although APH cannot be prevented but maternal and perinatal morbidity and mortality associated with APH can be reduced significantly by aggressive expectant management.

Presently increase in use of ultrasound for placental localization and to diagnose abruptio placenta, improved obstetrical and anesthetic facilities, increase in use of blood and its products to correct anemia and advanced neonatal care facilities to make increase chances of survival of a preterm infant, all totally have played important role in decreasing perinatal as well as maternal morbidity and mortality. In day-to-day practice, an obstetrician has to tackle life threatening condition of APH and take a timely judicious decision of terminating pregnancy, keeping in mind the welfare of both the mother and the fetus without exposing either of them to undue risk. This study is to evaluate how far we have come and the effect of treatment on the perinatal and maternal outcome.

METHODS

Aims and objectives

To study the incidence of antepartum haemorrhage at SSIMS hospital. To highlight the importance of early diagnosis and treatment. To study the maternal and fetal outcome in antepartum haemorrhage. To study the associated risk factors contributing to maternal and fetal morbidity and mortality.

Study design

It was a retrospective record-based study.

Methodology

The study was conducted in Shri Shakaracharya Institute of Medical Sciences, Bhilai, Durg during the period of January 2020 to December 2020 after getting approval from the institutional ethical committee.

Inclusion criteria

All cases of APH with gestational age ≥ 28 weeks.

Exclusion criteria

Any antenatal cases of gestational age < 28 weeks with bleeding PV. Patients suffering from any other bleeding disorder. Bleeding from a source other than uterus.

Women who fulfilled the above criteria were included in the study. Data collection was done from the records maintained by hospital after ethical permission from the institutional ethical committee. The gestational age of the patient as per record was > 28 weeks of gestation. Basic obstetric ultrasound was performed to confirm the fetal growth parameters, placental position and amniotic fluid index. All patients presenting with APH were investigated and managed according to the suspected cause, severity and type of bleeding and the gestational age of the pregnancy.

Data analysis

The data were recorded in an excel sheet and descriptive analysis was performed and results were expressed in number and percentage.

RESULTS

Incidence of APH was 2% during the study period among 1503 cases studied. The results of the present study are indicative of an increased incidence of abruptio placenta (51.91%) and PP (45.80%) (Figure 1).

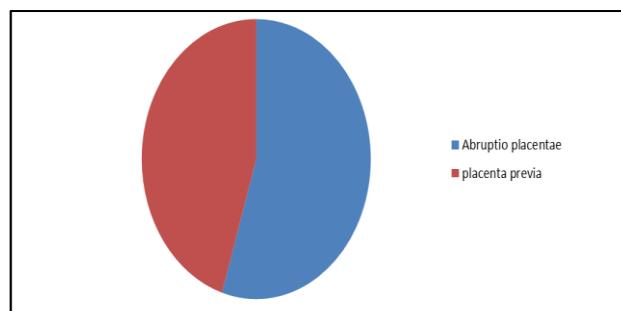


Figure 1: Distribution of patients according to cause of APH.

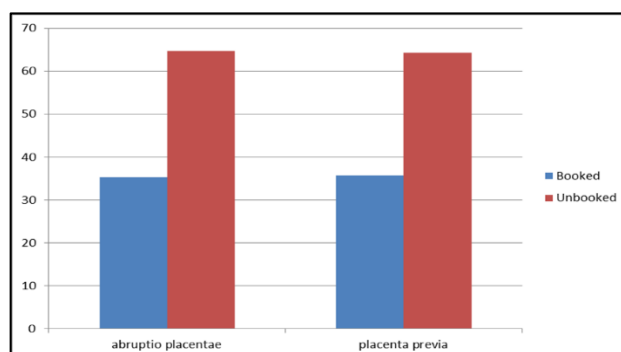


Figure 2: Booked versus unbooked patients.

Table 1: Mode of delivery.

Type of APH	LSCS (%)	Vaginal delivery (%)	Total
Abruptio placentae	11 (78.57)	3 (21.42)	14 (100)
Placenta previa	15 (88.23)	2 (11.76)	17 (100)
Total	26 (83.87)	5 (16.12)	31

In present study 64.51% patients were unbooked as compared to 35.48% patients who were booked. Out of

these unbooked cases AP comprised 64.70% and PP comprised 64.28% (Figure 2).

In PP, 2 patients (11.76%) were delivered vaginally and 15 patients (88.23%) were delivered by caesarean section. Of all the patients of abruptio placentae, 3 cases (21.42%) delivered vaginally and 11 cases (78.57%) delivered by caesarean section (Table 1).

Anemia was the most common complication in APH and was seen in 4 patients (25%) of PP and 4 patients (26.66%) of abruptio placentae (Table 2).

Table 2: Maternal outcome.

Maternal outcome	Abruptio placentae (%)	Placentae previa (%)	Total
Anemia	4 (26.66)	4 (25)	8
Couvellaire	3 (20)	0	3
Caesarean section hysterectomy	0	2 (12.5)	2
PPH	2 (13.33)	2 (12.5)	4
Renal failure	1 (6.66)	1 (6.25)	2
Scar dehiscence	0	2 (12.5)	2
Sepsis	3 (20)	2 (12.5)	5
UTI	2 (13.33)	3 (18.75)	5
Total	15	16	31

Table 3: Perinatal outcome.

Morbidity	Abruptio placentae	Placenta previa	Total
Normal	3	4	7
Birth asphyxia	2	6	8
Hyaline membrane disease	2	1	3
Neonatal jaundice	0	0	0
Prematurity	10	5	15
Total	17	16	33
Fetal weight			
Low birth weight (%)	10 (58.82)	6 (37.5)	16
Normal (%)	7 (41.17)	10 (62.5)	17
Total	17	16	33
Fetal mortality			
Birth asphyxia	0	0	0
Still birth and early neonatal death	3	1	4
RDS	1	0	1
Total	4	1	5

Prematurity was the most common complication in APH, followed by birth asphyxia. In PP, Prematurity was commonly seen in abruptio placentae. 10 neonates were premature. 3 neonates had respiratory distress syndrome. 10 babies of AP were low birth weight out of 17 babies and out of 16 babies, 6 babies of PP were low birth weight. 3 early neonatal deaths and still births occurred in abruptio placentae (Table 3).

DISCUSSION

In the day-to-day practice, an obstetrician has to tackle life threatening condition of APH and take a timely judicious decision of terminating pregnancy, keeping in mind the welfare of both the mother and the fetus without exposing either of them to undue risk.

In the present study incidence of various causes of APH was noted. Incidence of abruptio placentae was largest 54.83% followed by PP 45.16%. The results of the present study are indicative of an increased incidence of abruptio placentae (51.91%) and PP (45.80%) probably because of unregistered cases, low socio-economic status, anemia, Asian origin and prevalence of previous caesarean section, D and C and increased incidence of pregnancy induced hypertension. However, the incidence of PP is lower in western literature. Taylor et al observed higher incidence of PP in women of Asian origin.¹¹

To study the effect of antenatal care on maternal and fetal outcome in abruptio placentae, patients were divided into booked and unbooked. Patient without a single ANC visit was labelled as unbooked and patients who had a one or more ANC checkups in our hospital were labelled as booked. In present study 64.51% patients were unbooked as compared to 35.48% patients who were booked. Out of these unbooked cases AP comprised 64.70% and PP comprised 64.28%. Rai et al in his study also reported more number of AP cases were unbooked.¹² The importance of antenatal visits in prevention of AP has also been stated by Baskette et al who reported that in their series 3/4th (75%) of cases were unbooked.¹³

In PP, 2 patients (11.76%) were delivered vaginally and 15 patients (88.23%) were delivered by caesarean section. Of all the patients of abruptio placentae, 3 cases (21.42%) delivered vaginally and 11 cases (78.57%) delivered by caesarean section. All obstetricians agree that early and timely caesarean section improve perinatal salvage in patients with abruptio placentae.^{14,15} The indication for caesarean section was studied according to causes of APH.¹⁶ Cotton et al reported haemorrhage as an indication for caesarean section in 70.6% of patients of APH in their study.¹⁷

One of the main aim of proper management of APH cases is to minimize the maternal mortality and morbidity. Anemia was the most common complication in APH and was seen in 4 patients of PP and 4 patients of abruptio placentae. Chakraborty et al reported an incidence of 16.25% PPH in cases of APH.¹⁰ In PP group, 2 patient (12.5%) had placenta accreta who underwent caesarean hysterectomy. Pedowitz et al, Cotton et al and McShane et al reported the incidence of placenta accreta as 4.4%, 4% and 6.32% respectively.^{7,14,17}

In abruptio placentae group couvellaire uterus was seen in 3 (20%) cases. Rai et al reported couvellaire uterus in 10.5% of APH patients in their study.¹² Gorodeski et al reported maternal mortality of 0.46% in APH while Pedowitz et al reported it as 0.9%.^{6,14} Cotton et al found no mortality in cases of PP in their study.¹⁷

One of the major aspects of this study was to study the perinatal outcome in various groups of APH. Prematurity was the most common complication in APH, followed by birth asphyxia. In PP, Prematurity was commonly seen in

abruption placentae. 10 neonates were premature. 3 neonate had respiratory distress syndrome. 10 babies of AP were low birth weight out of 17 babies and out of 16 babies, 6 babies of PP were low birth weight. 3 early neonatal deaths and still births occurred in abruptio placentae.

CONCLUSION

APH is still the leading cause of maternal morbidity. APH continues to be a major contributor in overall obstetrical hemorrhage. The incidence of abruptio placentae continues to be high. Abruptio placenta carries a poor fetal prognosis as majority present with IUD.

Improvements in management of placenta praevia like expectant management have helped improve neonatal survival and reduce maternal morbidity. More liberal use of C-section in well-equipped hospitals with availability of blood transfusion services and neonatal care services will help to lower the perinatal mortality and morbidity in placenta previa. Good regular ANC and availability of medical services remains the backbone for the good maternal and perinatal outcome in APH.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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