

A prospective study to assess maternal and fetal Outcome in patients with antepartum hemorrhage

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Abstract

Aim: to assess maternal and fetal outcome in patients with antepartum hemorrhage (AP). **Materials & Methods:** This prospective study was carried out in the Department of Obstetrics and Gynecology at Shri Krishna Medical College and Hospital Muzaffarpur, Bihar, India from Jan 2018 to March 2019. The present study was conducted on 110 cases of antepartum hemorrhage. In all cases, maternal and fetal outcome was recorded. **Results:** the most common type of APH was abruptio placentae seen in 60, placenta praevia in 35 and undetermined in 15 patients. Out of 60 cases of abruptio placentae, 24 were live birth, 17 were still birth, 13 were IUD and 6 were NICU death and in postpartum haemorrhage (PP), 13 were live birth, 11 were still birth, 7 were IUD and 4 were NICU death. In undetermined, 6 were live birth, 4 were still birth, 3 were IUD and 2 were NICU deaths. Common cause of deaths in AP was sepsis in 19 and respiratory distress syndrome in 13. 38 in AP and 24 in PP had baby birth weight <2500 grams. Maternal death was seen 7 in AP, 3 in PP and 1 in undetermined type. **Conclusion:** APH cannot reliably be predicted. APH is associated with maternal and perinatal morbidity and mortality. We found that the common reason for APH was abruptio placentae, placenta praevia and undetermined.

Keywords: Antepartum hemorrhage, Abruptio placentae, placenta praevia

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Introduction

Obstetric haemorrhage is the world's leading cause of maternal mortality [1]. Antepartum haemorrhage is defined as bleeding from or into the genital tract after 28 weeks of pregnancy and before delivery of the baby [2]. It is one of the most frequent emergencies in obstetrics occurring at a prevalence of 0.5-5% [3].

Antepartum haemorrhage is a grave obstetrical emergency and is a leading cause of maternal and perinatal mortality and morbidity. It complicates about 2-5% of all the pregnancies. It can be due to placenta praevia, abruptio placentae, indeterminate cause or local causes of genital tract. Maternal mortality due to antepartum haemorrhage has significantly decreased in the developed countries due to better obstetrical

outcome. In India maternal and perinatal mortality is still very high due to associated problems like anaemia, difficulties in transport in cases of emergency and restricted medical facilities [4]. Zeeman's study of obstetric critical care provision identifies haemorrhage as one of the most frequent reasons for admission to intensive care unit [5].

Maternal complications of antepartum haemorrhage are malpresentation, premature labour, postpartum haemorrhage, shock, retained placenta. It also includes higher rates of caesarean sections, peripartum hysterectomies, coagulation failure and death. Foetal complications are premature delivery, low birth weight, intrauterine death, congenital malformations and birth asphyxia [6-10]. In modern obstetrics there is an increase in the caesarean section rates of 30-40%. In the case of the previous caesarean section there is an increase in the incidence of placenta praevia. Morbidly adherent placenta poses a challenge in these cases. Folic acid deficiency is considered as one of the etiological factors for abruptio placentae. In developing countries like India, there is a high incidence of untreated

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preeclampsia which is the main etiological factor for development of abruptio placentae. So it is important to analyse various causes of antepartum haemorrhage in present day obstetrics in India[11-13].Antepartum haemorrhage goes hand in hand with postpartum haemorrhage as there is high incidence of postpartum haemorrhage in cases of antepartum haemorrhage. Untreated anaemia is universally found in our scenario. Blood transfusion facilities are still inadequate in rural India. Late referral, lack of transport facilities and inadequate knowledge of medical and paramedical staff contributes to poor prognosis in cases of antepartum haemorrhage in developing countries like India.

Presently increase in use of ultrasound for placental localization and to diagnose abruption placenta, improved obstetrical and anaesthetic facilities, increase in use of blood and its products to correct anemia and advanced neonatal care facilities to make increased chances of survival of 2 a preterm infant, all totally have played important role in decreasing perinatal as well as maternal morbidity and mortality[14]. The present study was conducted to assess maternal and fetal outcome in patients with antepartum hemorrhage.

Material and methods

This prospective study was carried out in the Department of Obstetrics and Gynecology at Shri Krishna Medical College and Hospital Muzaffarpur, Bihar, India from jan 2018 to March 2019, after taking the approval of the protocol review committee and institutional ethics committee. After taking informed

Results

consent detailed history was taken from the patient, or the relatives if the patient was not in good condition. Data was collected as regards to Age, Parity, Menstrual history, Obstetric history, history of bleeding per vagina, abdominal pain, loss of fetal movement, general examination and systemic examination was carried out. At the time of admission, proper history was taken and examination was done.

Inclusion criteria

- All cases of APH

Exclusion criteria

- Patient suffering from any other bleeding disorder
- Bleeding from a source other than the uterus.
- Multiple pregnancy
- Local cause of bleeding per vagina

Methodology

A careful clinical examination was done. Routine laboratory investigation such as complete blood count, blood grouping and viral markers was reported. In all cases, maternal and fetal outcome was recorded.

Statistical analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2010) and then exported to the data editor page of SPSS version 19 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages and means.

Table 1: Distribution of study subjects

Types	Number
Abruptio placentae	60 (54.5%)
Placenta Praevia	35 (31.8%)
Undetermined	15 (13.6%)
Total	110 (100.0%)

Table 2: Fetal outcome

Outcome	Abruptio placentae N=60	Placenta Praevia N=35	Undetermined N=15
Live	24	13	6
Still birth	17	11	4
IUD	13	7	3
NICU death	6	4	2
Fetal Presentation			

Breech	9	5	7
Cephalic	44	25	4
Transverse lie	3	3	3
Unstable lie	4	2	1
Neonatal Birth Weight (grams)			
<2500	38	24	4
2500-4000	13	7	8
>4000	9	4	3
Cause of Death			
Sepsis	19	7	3
RDS	13	5	2
Shock	2	8	3
Pulmonary haemorrhage	4	3	2

Table 3: Maternal outcome

Outcome	Abruptio placentae N=60	Placenta Praevia N=35	Undetermined N=15
Mode of delivery			
Emergency C/S	33 (55%)	20 (57.14%)	9 (60%)
Elective C/S	22 (36.67%)	10 (28.57%)	4 (26.67%)
Vaginal	5 (8.33%)	5 (14.29%)	2 (13.3%)
Complications			
Anemia	10	8	4
HELPP	1	0	1
MI	2	0	0
DIC	3	2	0
Maternal death	7	3	1
PPH	5	3	1
Blood transfusion	28	15	6

Discussion

Antepartum hemorrhage is defined as bleeding from the vagina after 24 weeks. It occurs in 2-5% of pregnancies and is an important cause of fetal and maternal deaths. Thirty percent of maternal deaths are caused by antepartum hemorrhage of which 50% are associated with avoidable factors. The causes of antepartum hemorrhage can be divided into three main groups, placenta previa, placental abruption and others [16]. Abruptio placentae are the terminology used for premature separation of a normally sited placenta due to bleeding. Placenta previa occurs when the placenta is implanted wholly or in part into the lower segment of

the uterus [17]. Abruptio placentae and placenta praevia comprised of almost half cases of APH whereas causes such as cervical polyp, cervicitis, genital tumors, vulvar varicosities etc. are also seen [18]. The present study was conducted to assess maternal and fetal outcome in patients with antepartum hemorrhage. In present study, the common type of AP was abruptio placentae seen in 60, placenta Praevia in 35 and undetermined in 15 patients. We found that out of 60 cases of abruptio placentae, 24 were live births, 17 were still births, 13 were IUD and 6 were NICU deaths. In PP, 13 were live births, 11 were still births, 7 were IUD and 4 were

NICU deaths. In undetermined, 6 were live births, 4 were still births, 3 were IUD and 2 were NICU deaths. Common cause of deaths in AP was sepsis in 19 and respiratory distress syndrome in 13. 38 in AP and 24 in PP had baby birth weight <2500 grams. 44 in AP and 25 in PP had cephalic lie of baby. Main cause in PP was shock seen in 8 and sepsis in 7, in undetermined type, the common cause was sepsis in 3, RDS in 2 and shock in 3 cases. Wasnik et al[19] found that the incidence of APH was 1.31%. 73% cases of APH were associated with Pregnancy induced hypertension suggesting PIH is one of the major risk factors. Maternal and perinatal morbidity was very high with increased rates cesarean section 90%, postpartum hemorrhage (36%), need of blood transfusion (75%), preterm deliveries (65%), low birth weight (40%) and NICU admission (44%). Though there is no maternal mortality due to timely intervention, 3% patients underwent Obstetric Hysterectomy and 6.4% required ICU admission. Perinatal mortality was very high (21%). We observed that 55% cases in AP, mode of delivery was emergency C/S, 57.14% in PP and 60% in undetermined. Most common complication in AP was anemia seen in 10 in AP, 8 in PP and 4 in undetermined. Maternal death was seen 7 in AP, 3 in PP and 1 in undetermined type. 28 patients in AP, 15 in PP and 6 in undetermined needed blood transfusion. Jharail et al[20] found that incidence of APH was found to be 1.98%. Placenta previa was most common. APH was commonly associated with multigravida and most cases were in the age group of 26-30 years. Most of the PP and abruption cases were admitted at 34-37 weeks and 31-33 weeks respectively. High risk factors included previous LSCS and hypertension, multiple pregnancies and mal-presentations. Most of the patients underwent preterm LSCS. Most fetal complications were due to prematurity. 58.6% patients were transfused blood. Overall perinatal mortality was 20.1% and maternal mortality was zero. Takai et al[21] found that the prevalence rate of APH was 1.2%. In 68.3% of cases, the most common cause was abruptio placenta and in 30% cases placenta previa. Maximum cases of APH were observed in 35-39 years of age group (33.0%). There were 123 live births and 92 stillbirths. The cesarean section rate was 53.5%.

Conclusion

APH cannot reliably be predicted. APH is associated with maternal and perinatal morbidity and mortality. It is a good practice to avoid vaginal examination and to

advise to avoid penetrative sexual intercourse if placenta previa is diagnosed. All women presenting with APH should be assessed to establish whether urgent intervention is necessary to manage maternal or fetal compromise. Multi-disciplinary approach and senior input is necessary in making decisions about timing and mode of delivery. Investigations should be performed to assess the extent and physiological consequences of the APH. Ultrasound can be used for the diagnosis of placenta praevia, but ultrasound scan does not exclude abruption. Placental abruption is a clinical diagnosis and no sensitive or reliable diagnostic tests are available.

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