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Evaluation of Antepartum Haemorrhage and its Maternal and Perinatal Outcome in a Tertiary Care Centre– A Cross-Sectional Study

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ABSTRACT

Background: This study was done to determine the various causes of antepartum hemorrhage and its maternal and fetal outcomes in tertiary care center.

Results: In this study, the chief cause of APH was found to be percreta accounting for 24 cases. Other causes included abruption (23/84), previa (12/84), accreta (16/84) and increta (9/84). Out of 84 subjects, 38 recovered, 17 were shifted to the ICU and 29 subjects passed away. There were 38 preterm babies. 10 had been delivered with stillbirth, 19 had neonatal death and 17 were shifted to NICU. Blood transfusion was required for 21 mothers. Postpartum hemorrhage was seen in 12 mothers and 13 subjects underwent peripartum hysterectomy.

Conclusion: From the findings of this study, it can be concluded that the chief cause of APH was percreta. Other causes included abruption, increta, accreta and previa. Majority of the mothers had recovered, while, a few had to be admitted to the ICU whereas some of them passed away. Various maternal outcomes included postpartum hemorrhage, peripartum hysterectomy and blood transfusion. Perinatal outcomes included preterm birth, still birth, NICU admission and death.

Keywords: *APH, Maternal outcomes, Fetal outcomes*

1. INTRODUCTION

Antepartum hemorrhage (APH) has been a leading cause of maternal mortality worldwide, especially in developing countries like India. Its early diagnosis and timely management can APH is defined as bleeding from the genital tract after 28 weeks of gestation to delivery of the baby.[1,2]

Obstetric haemorrhage accounts for 22- 25% of maternal mortality and amongst these antepartum-haemorrhage is the most common cause of morbidity and mortality accounting for half of these deaths. APH complicates 3-5% of pregnancies The major etiologies of APH are placenta previa and abruptio placenta.

Nowadays, with increasing incidence of cesarean delivery, placenta accreta spectrum (PAS) disorders contribute a fair chunk of causes. The other causes are cervical polyps, varicosities (vaginal, vulvar, and cervical), cancer of the cervix, cervical/endocervical erosions, cervicitis, vasa previa, vaginal infections, bloody show, genital lacerations, degenerating uterine myomata, foreign bodies, marginal placental separation, and so on. However, in some cases, the exact cause cannot be ascertained and remained of undetermined origin. It can complicate about 2–5% of pregnancies with an incidence of placenta previa and abruptio placentae about 0.33% to 0.55% and 0.5 to 1%, respectively.[3,4]

This study was done to determine the various causes of antepartum hemorrhage and its maternal and fetal outcomes in tertiary care center.

2. MATERIAL AND METHODS

This was a cross-sectional study done in the OBGY department in tertiary care center. 84 antenatal women with gestational age of 28 weeks and above presenting with APH had been included in this study. The sample size was estimated using the formula for comparison of means between two groups.

Sample size was calculated using the formula. Sample Size (n) = Z 1-α /22 p (1-p)/ d2.

History of women with coagulation disorder and all women on anticoagulant therapy were the exclusion criteria for this study. All the antenatal women were willing to participate and signed the informed consent document was enrolled in the study. Demographic characteristics included age, booking status, area of residence, socioeconomic status, and gestational age at presentation were noted. Clinical characteristics including presenting complaints, fetal heart sounds (normal, reduced, and absent), and obstetric factors were recorded. A previous history of unexplained fetal loss, pregnancy induced hypertension, LSCS, curettage, previous APH, multiple pregnancies, malpresentation and pre-eclampsia was recorded.

Patients were then subjected to ultrasound to ascertain uterus height, gestational age, location and size of placenta, presentation of fetus, position of fetal head (fixed or floating), FHS, status of uterus (contracted or relaxed) and intra-or retro-placental clots. Per speculum examination was done to look for cervical OS and presence of bleeding. Per vaginal examination was done to know the status of cervical OS, effacement of cervix, and appropriateness of pelvis. Laboratory investigations included complete blood counts (hemoglobin, total leucocyte count, differential leucocyte count), liver function test (bilirubin-total/direct/indirect, alanine transaminase (ALT), aspartate transaminase (AST), and albumin to globulin ratio), kidney function test (blood urea, serum creatinine, serum sodium, and serum potassium), bleeding time, clotting time, and prothrombin time-international normalized ratio (PT/INR).

The collected data was coded and entered in to EpiData Manager 4.6 and was transferred to SPSS version 26.0 for analysis. Descriptive and binary logistic regressions analysis was done. These explanatory variables with a value < 0.05 in multivariate analysis were considered as a significant predictor of maternal complication among women with antepartum hemorrhage. The result of the analysis was presented in texts, tables, and graphs as indicated.

3. RESULTS

Table 1: Causes of antepartum hemorrhage in antenatal women

Causes	Number of subjects	Percentage
Abruption	23	27.3
Previa	12	14.2
Accreta	16	19.04
Percreta	24	28.5
Increta	09	10.7

The chief cause of APH was found to be percreta accounting for 24 cases. Other causes included abruption (23/84), previa (12/84), accreta (16/84) and increta (9/84).

Table 2: Maternal outcome in women with antepartum hemorrhage

Outcome	Number of subjects	Percentage
Recovered	38	45.2
ICU	17	20.2
Mortality	29	34.6

Out of 84 subjects, 38 recovered, 17 were shifted to the ICU and 29 subjects passed away.

Table 3: Perinatal outcome

Outcome	Number of subjects	Percentage
Preterm/ low birth weight	38	45.2
Stillbirth	10	11.9
Neonatal death	19	22.6
NICU Admission	17	20.3

There were 38 preterm babies. 10 had been delivered with stillbirth, 19 had neonatal death and 17 were shifted to NICU.

Table 4: Maternal complications

Complications	Number of subjects	Percentage
Postpartum hemorrhage	12	14.2
Blood transfusion	21	25
Peripartum hysterectomy	13	15.4

Blood transfusion was required for 21 mothers. Postpartum hemorrhage was seen in 12 mothers and 13 subjects underwent peripartum hysterectomy.

4. DISCUSSION

Antepartum hemorrhage (APH) is a significant contributor to maternal mortality globally, particularly in developing nations such as India. Early identification and prompt intervention can mitigate the risks associated with maternal and fetal mortality and morbidity. APH is characterized by bleeding from the genital tract occurring after 28 weeks of gestation until the delivery of the infant.[5]

The primary causes of APH include placenta previa and abruptio placenta. In contemporary practice, the rising rates of cesarean sections have led to an increased prevalence of placenta accreta spectrum (PAS) disorders as a notable factor. Additional causes encompass cervical polyps, varicosities (in the vaginal, vulvar, and cervical regions), cervical cancer, cervical/endocervical erosions, cervicitis, vasa previa, vaginal infections, bloody show, genital lacerations, degenerating uterine myomas, foreign bodies, and marginal placental separation, among others.[6,7]

Nevertheless, in certain instances, the precise etiology remains unidentified and is classified as of undetermined origin. APH can complicate approximately 2–5% of pregnancies, with the incidence rates for placenta previa and abruptio placentae ranging from 0.33% to 0.55% and 0.5% to 1%, respectively.[8]

This study was done to determine the various causes of antepartum hemorrhage and its maternal and fetal outcomes in tertiary care center.

In this study, the chief cause of APH was found to be percreta accounting for 24 cases. Other causes included abruption (23/84), previa (12/84), accreta (16/84) and increta (9/84). Out of 84 subjects, 38 recovered, 17 were shifted to the ICU and 29 subjects passed away. There were 38 preterm babies. 10 had been delivered with stillbirth, 19 had neonatal death and 17 were shifted to NICU. Blood transfusion was required for 21 mothers. Postpartum hemorrhage was seen in 12 mothers and 13 subjects underwent peripartum hysterectomy.

Agarwal S, Ranjan M, Sachan S, Kumar L[9] in a retrospective study of 76 patients with APH. The authors found that most of the patients were to be second gravida (30%). Anemia was the most common associated morbidity (51.31%). 58% of these patients were of placenta previa, 14% were of abruption, and 10% were of accreta. Among all patients, 94.74% recovered well. 2.63% of cases could not be saved and resulted in maternal mortality. The proportions of babies alive, intra-uterine death (IUD), and intubated were 86.84%, 11.84%, and 1.32%, respectively. 17.1% of patients required lifesaving cesarean hysterectomy.

Oguejiofor CB, Okafor CD, Eleje GU et al[10] retrospectively assessed 6974 deliveries during 5-year The author found that out of 234/6074 had antepartum-haemorrhage (3.4% prevalence rate). Abruptio-placentae was the commonest cause and accounted for 69.5% of the cases (prevalence of 2.1%) while placenta praevia accounted for 28.2% of the cases (prevalence rate of 0.9%). The mean age of the women was 31.8±5.3 years. The mean parity was 3.4±1.7 and majority (63.8%) of the women were unbooked. The commonest identifiable risk factors were multiparity and advanced maternal age. One-hundred-and sixty-six (77.9%) women were delivered through the abdominal route. Postpartum-haemorrhage occurred in 22.1% (47) of the cases while prematurity was the commonest fetal complications. Maternal mortality was 0.47% (1) while still birth was 44.1% (94).

5. CONCLUSION

From the findings of this study, it can be concluded that the chief cause of APH was percreta. Other causes included abruption, increta, accreta and previa. Majority of the mothers had recovered, while, a few had to be admitted to the ICU whereas some of them passed away. Various maternal outcomes included postpartum hemorrhage, peripartum hysterectomy and blood transfusion. Perinatal outcomes included preterm birth, still birth, NICU admission and death.

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