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PERINATAL OUTCOMES IN PREGNANT PATIENTS PRESENTING WITH ANTEPARTUM HEMORRHAGE: OUR EXPERIENCES AT A TEACHING HOSPITAL IN CENTRAL PUNJAB.

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ABSTRACT… Objectives: Antepartum Hemorrhage is bleeding from or into the genital tract from the period of viability of fetus (28 weeks) till the end of second stage of labor. Antepartum hemorrhage is associated with a very high perinatal mortality rate. We present our experience of perinatal outcomes in cases of antepartum hemorrhage with the aim of highlighting the cause of antepartum hemorrhage and the adverse outcomes. **Study Design:** Descriptive Cross sectional study. **Setting:** Department of Gynecology & Obstetrics, Sargodha Medical College, Sargodha. **Period:** Jan 2018 to Jun 2018. **Material and Methods:** Ninety six pregnant patients between ages of 15-45 years diagnosed as cases of antepartum hemorrhage were enrolled. Patients with coagulation disorders, twin pregnancies, abnormal lie or presentation, previous scar and any known congenital anomaly. Cause of antepartum hemorrhage and mode of delivery was recorded. Perinatal outcomes were determined in terms of frequencies of perinatal mortality, stillbirth and low birthweight babies. **Results:** The etiology of antepartum hemorrhage in our setup was placenta previa (43.75%); placental abruption (37.5%); Toxemia (10.41%) and unclassified causes in 8.33% patients. The perinatal mortality rate was 43.75% in our study. The overall frequency of low birthweight babies and stillbirth was 62.5% and 27.08% respectively. **Conclusion:** Antepartum hemorrhage is a major cause of perinatal mortality in our country. A prompt diagnosis of the cause followed by early cesarean section can help reduce the overall mortality.

Key words: Antepartum Hemorrhage, Placenta Previa, Toxemia, Stillbirth.

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INTRODUCTION

Bleeding from or into the genital tract from the period of viability of the fetus till the end of second stage of labour is termed as Antepartum hemorrhage. The age of viability is taken as 20 weeks in the North America, 24 weeks in the United Kingdom and most of Europe and 28 weeks in Indian subcontinent.[1,2] Hemorrhage (both antepartum and postpartum) is one of the leading causes of maternal morbidity and mortality in the world. According to data from Centre for Disease Control (CDC), hemorrhage was found to be a direct cause of maternal death in about 30% of cases.[3] Antepartum hemorrhage has always been one of the most feared complications in obstetrics. It complicates about 2-6% of all the pregnancies worldwide.[4]

According to the estimates by the World Health Organization (WHO), there are about 2.9 million newborn deaths during the neonatal period with another 2.6 million stillbirths around the world annually.[5,6] Adverse pregnancy outcomes associated with placenta previa and abruptio placentae had been previously reported in many studies. Where antepartum hemorrhage is not attributable to either of these serious conditions, the literature is sparse, scanty and sometimes conflicting regarding the associated risk of adverse perinatal outcomes.[7]

Placenta previa complicates 0.33 percent to 0.55 percent of all pregnancies and incidence of placental abruption incidence is approximately 0.5 to 1 percent.[8] Though the perinatal mortality rate due to antepartum hemorrhage has

significantly dropped in the developed world with the introduction of improved medical facilities, it still remains one of the most important cause of perinatal mortality and morbidity in the developing and low income counteries.[9] Knowing the outcome of the fetus with antepartum hemorrhage is important in order to set out policies to reduce perinatal mortality of among the most vulnerable group of patients.[10]

We present our experience of perinatal outcomes in 96 consecutive cases of antepartum hemorrhage presenting to our hospital with the aim of highlighting the cause of antepartum hemorrhage, the adverse outcomes and the relationship between the two. Since there is limited data about perinatal outcomes in antepartum hemorrhage in the country, the findings of this study will help bridge the gap in the identification of patients at increased risk of complications thereby decreasing morbidity and mortality associated with antepartum hemorrhage.

MATERIAL AND METHODS

We carried out a descriptive case series study from Jan 2018 to Jun 2018 on a total of 96 pregnant patients diagnosed as a case of antepartum hemorrhage (bleeding from or in to the genital tract, occurring from 24 weeks of pregnancy and prior to the birth of the baby) presenting to the department of Gynecology & Obstetrics, Government Mian Mola Buksh Hospital, Sargodha. The study was started after approval from hospital ethical review committee and institutional review board of Sargodha Medical College, Sargodha. Informed and written consent was taken from all the patients before enrollment in the study.

The inclusion criteria included pregnant patients presenting with antepartum hemorrhage between the ages of 15 years to 45 years with a gestational age between 24 weeks to 42 weeks. The exclusion criteria included patients with coagulation disorders, twin pregnancies, abnormal fetal lie and presentation, history of previous scar and any detected congenital anomaly on anomaly scan. The sample size was calculated by WHO sample size calculator by taking the absolute precision required as 0.10, confidence level as 95% and anticipated population proportion as 47.02%.[6] The sample size came out to be 96 patients. Non-probability consecutive sampling method was used.

A detailed history including patient's age, parity, gestational age, and presenting complaints was taken. A general examination with recording of vital signs was performed followed by a thorough systemic examination. All parameters of maternal and fetal well-being were recorded. All cases with antepartum hemorrhage were evaluated to determine the cause of hemorrhage (placenta previa/ placental abruption/ toxemia/ others) and to determine the perinatal outcome of patients with antepartum hemorrhage was recorded in terms of babies born with low birth weight, still birth and neonatal death.

Baseline investigations of the patients including complete blood picture, coagulation profile, hepatitis screening, renal function tests, liver function tests and ECG were requested along with blood grouping and crossmatch. All patients with antepartum hemorrhage were started on prophylactic antibiotic therapy in the form of injection Ampicillin 500 mg 6 hourly. Blood transfusion was given to all patients with a hemoglobin less than 8 mg/dl as per the hospital protocol. Thereafter the patients were monitored 4 hourly. A 4 hourly monitoring of pulse, blood pressure, temperature and fetal heart sounds was done till the delivery of the baby. Demographics, relevant clinical history, diagnosis and neonatal outcomes were recorded by the principal investigator on a predesigned proforma.

All patients were given their due respect and their comfort was taken care of during the study. The exclusion criteria was strictly followed to control confounders and bias in the study. The data was analyzed by SPSS version 23.0. Quantitative variables were presented as mean ± standard deviation like maternal age and gestational age. Frequencies and percentages were computed for qualitative variables like mode of delivery, perinatal outcome (low birth weight/ still birth/ neonatal death), and cause of antepartum hemorrhage

(placenta previa/ placental abruption/ toxemia/ others). P value ≤0.05 was taken as significant.

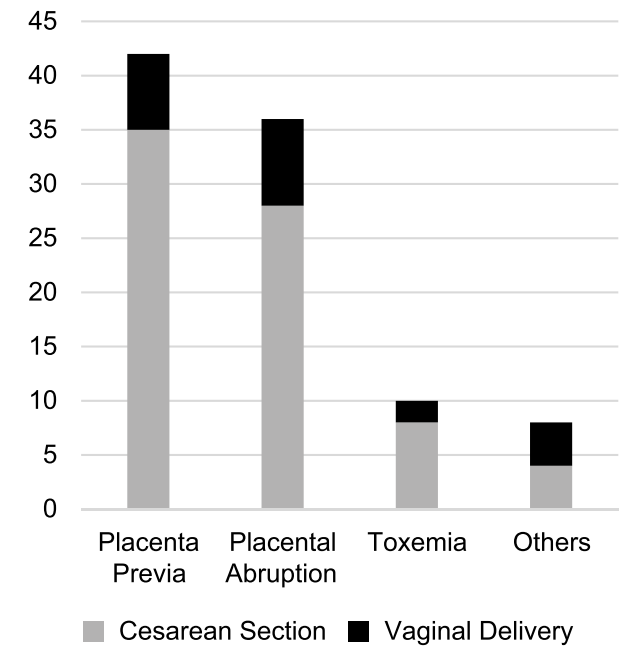
RESULTS

The mean age of patients presenting with antepartum hemorrhage was 28 ± 6.5 years a range of 17-41 years. The mean gestational age at the time of presentation to our department was 36.5 ± 3 weeks. The most common cause of antepartum hemorrhage in our setup was found to be placenta previa accounting for 43.75% of all cases followed by placental abruption in 37.5% cases; Toxemia in 10.41% cases and other unclassified causes in 8.33% cases. The perinatal mortality rate was found to be 43.75% in our study. The frequencies of perinatal mortality, stillbirth and low birth weight babies, according to the cause of antepartum hemorrhage are presented in Table-I.

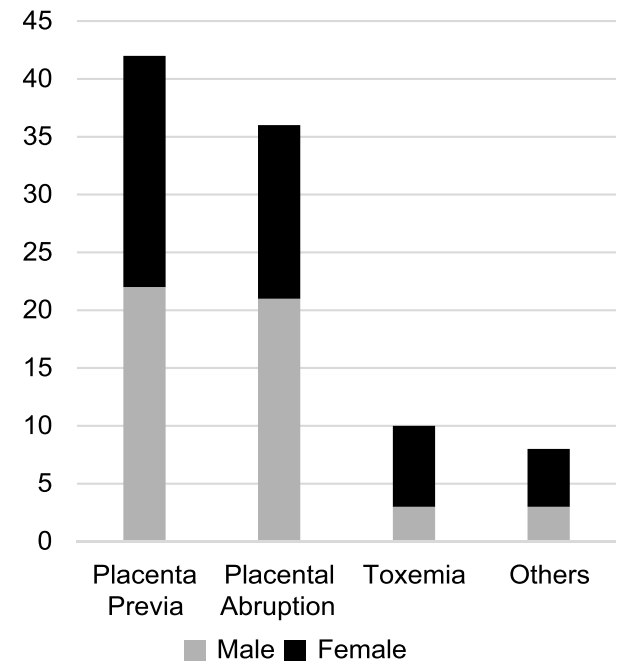
The Graphs-I shows the mode of delivery according to the cause of antepartum hemorrhage while the gender distribution of the babies according to the cause of antepartum hemorrhage is depicted in Graph-II. Babies with birthweight of less than 2500 grams were labelled as having low birthweight. The overall frequency of low birthweight babies in our study was found to be 62.5%. The perinatal mortality among low birth weight babies was considerably high as compared to babies born with normal birthweight. Perinatal mortality was found to be 76.67% in low birth weight babies. Out of the total of 42 babies who died, 28 were males (66.67%) and 14 were females (33.33%). Cesarean section was done in 78.13% cases while 21.87% patients were delivered by spontaneous vaginal delivery. The perinatal mortality was found to be 36.0% in babies born by cesarean section and it was 71.43% in babies delivered by spontaneous vaginal delivery. Thus early cesarean section was found to decrease the mortality in our study.

Cause of APH	No. of Patients		Perinatal Mortality		Stillbirth		Low Birth Weight	
	No.	%	No.	%	No	%	No	%
Placenta Previa	42	43.75	11	26.19	5	11.90	33	78.57
Placental Abruption	36	37.5	25	62.5	16	44.44	17	68.0
Toxemia	10	10.41	5	50.0	4	40.0	8	80.0
Others	8	8.33	1	12.5	1	12.5	2	25.0

Table-I. Frequencies of perinatal mortality, stillbirth and Low birthweight babies.



Graph-I. Mode of delivery



Graph-II. Gender distribution

DISCUSSION

Antepartum hemorrhage is one of the leading causes of perinatal mortality in our country. The mean age of patients presenting with antepartum hemorrhage was 28 ± 6.5 years in our study. The mean age was reported to be 32.8 ± 5.5 years and 26.8 ± 3.2 years in studies by Takai et al and Singhal et al respectively.[11,12] Another study from Peshawar in 2016 by Gul et al[13] reported the mean age of 29 ± 6.06 years.

In our study the overall perinatal mortality due to antepartum hemorrhage was 43.75% which was comparable to similar studies by Jain et al[10] and Patel et al[14] from India who reported a perinatal mortality rate of 47.01% and 43% respectively. A study from Nigeria[11] also revealed a perinatal mortality rate of 42.8% in antepartum hemorrhage while Singhal et al[12] reported a perinatal mortality of 23.70% and Usynina et al reported a perinatal mortality of only 4.7% from Russia.[15] Thus a lot of effort is needed to bring the perinatal mortality in patients presenting with antepartum hemorrhage in developing countries like Pakistan at par with the developed world.

Perinatal complications of antepartum hemorrhage include low birth weight, intrauterine death and birth asphyxia.[16] Jain et al in 2015 found that perinatal mortality in placenta previa cases was 29.6%, while in placental abruption, it was 64.7%. In patients with toxemia, perinatal mortality was 80%. Non-toxemia and unclassified accounted for 58.3% and 25% cases respectively. 75.9% of the babies were low birth weight in cases of placenta previa while the frequency was 76.47% in cases of placental abruption. The perinatal mortality in low birth weight babies was reported to be equal to 57.14%.[10]

In another study by Patel M et al. in 2016, the incidence of antepartum hemorrhage was reported to be 1.4%. 71.4% patients had placenta previa while 28.6% were cases of placental abruption. 75% babies were low birth weight with birthweight below 2500 grams. Still birth cases accounted for 66.6% of the cases. 100% of mothers presenting with antepartum hemorrhage were anemic and cesarean section rate was 61%.[14]

Kedar K et al. reported that the incidence of placental abruption, placenta previa and unclassified hemorrhage in cases presenting with antepartum hemorrhage was 51.91%, 45.80% and 2.29% respectively. 66.64% and 33.34% babies were low birth weight in placental abruption and placenta previa cases respectively. 65.64% patients of antepartum hemorrhage delivered by caesarean section as compared to 34.35% patients delivered by spontaneous vaginal delivery. 93.33% patients of placenta previa underwent caesarean section whereas 44.11% patients of placental abruption underwent caesarean section.[17]

Tyagi P et al. in another study found perinatal mortality in antepartum hemorrhage to be 42%. (40% of placenta previa cases and 47.3% of placental abruption cases) 89% of antepartum hemorrhage cases had cesarean section and 11% had vaginal delivery.[18] In our study the cesarean section rate in antepartum hemorrhage was 78.13% while 21.87% patients were delivered by spontaneous vaginal delivery.

Since antepartum hemorrhage is a major cause of perinatal deaths and complications, it is the need of the hour to devise our own evidence based guidelines for the early recognition and management of these patients that can be implemented in our country. Early diagnosis, prompt management of shock and resuscitation, blood transfusion, and a low threshold for doing a cesarean section are the keys to saving the life of both the mother as well as the fetus in cases of antepartum hemorrhage.[19,20]

Antenatal screening and checkups are vital for ringing the alarm bells for early referral of patients at high risk of developing antepartum hemorrhage. The adverse pregnancy outcomes were found to be as much as 22 times increased in unbooked pregnancies than the booked cases.[21] The antenatal screening needs to be expanded with focus on the education of the lady health workers and advertisements on the print, electronic and social media channels can

help educate the people at increased risk. There is paucity of data in the Pakistani literature on antepartum hemorrhage. Further research is recommended on this topic with study of the causes of perinatal mortality and other associated factors to help identify the patients at risk of developing antepartum hemorrhage in order to reduce the high perinatal mortality rate in our country.

CONCLUSION

Antepartum hemorrhage is still a major cause of perinatal mortality in our country. A prompt diagnosis of the cause followed by early delivery of the baby by cesarean section can help reduce the overall mortality. We also found that male babies were more prone to complications than the female babies. Education of the mothers regarding routine antenatal checkups and scans and improvement in the antenatal healthcare services can help segregate the patients at risk of developing antepartum hemorrhage.

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