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ORIGINAL ARTICLE

Perinatal Outcome in Patients of Antepartum Haemorrhage

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ABSTRACT

Objectives: To determine the perinatal outcome in patients of antepartum haemorrhage at tertiary care hospital.
Study design: descriptive, case series.
Settings: Department of Gynecology & Obstetrics, Liaquat National Hospital Karachi.
Study duration: 3rd November 2018 to 2nd May 2019.
Materials & Methods: Total 132 patients with antepartum haemorrhage of 15-45 years of age were selected. Congenital anomalies detected on ultrasonography were excluded. 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 systemic examination. All parameters of maternal and fetal well-being were recorded. All cases with antepartum haemorrhage were evaluated and perinatal outcome of patients with antepartum haemorrhage was recorded including low birth weight, still birth and neonatal death.
Results: Age range in this study was from 15 to 45 years with mean age of 28.94 ± 4.23 years. Majority of the patients 79 (59.85%) were between 15 to 30 years of age. Mean gestational age was 33.20 ± 3.92 weeks. Mean parity was 3.13 ± 0.89. Mean amount of bleeding per vagina was 845.33 ± 67.22 ml. In this study, frequency of perinatal outcome in patients of antepartum haemorrhage was as follows; low birth weight was found in 71 (53.79%), stillborn in 56 (42.42%) patients and neonatal death in 23 (17.42%) patients.
Conclusion: This study concluded that a proper protocol should be designed in these high risk patients for antenatal monitoring and proper management plans in order to reduce the morbidity and mortality of the fetus.
Keywords: Antepartum Haemorrhage, Low Birth Weight, Neonatal Death.

INTRODUCTION

Antepartum haemorrhage is defined as any bleeding from or into the genital tract after 24 weeks of gestation and before the end of second stage of labour [1]. APH has always been one of the most feared complications in obstetrics. Hemorrhage is one of the leading causes of maternal mortality and morbidity. According to CDC, hemorrhage was a direct cause of maternal death in about 30% of cases [2]. Antepartum hemorrhage (APH) complicates about 2-5% of all the pregnancies [3].

Adverse pregnancy outcomes associated with placenta previa and placental abruption had been previously established by several publications. Where antepartum haemorrhage (APH) is not attributable to either of these serious conditions, the literature is sparse and sometimes conflicting regarding the associated risk of adverse perinatal outcomes. Yet, the condition of ante-partum bleeding of unknown origin (ABUO) is by far the most common form of APH, contributing to 50% of all APH, and may complicate up to 6% of pregnancies [4].

Placenta previa complicates 0.33 percent to 0.55 percent of all pregnancies and incidence of placental abruption is approximately 0.5 to 1 percent [5]. Though perinatal mortality due to antepartum haemorrhage has significantly dropped in developed countries with the introduction of improved medical facilities, in developing countries, it is one of the most important cause of perinatal mortality and morbidity. Knowing the outcome of fetus with antepartum hemorrhage is important set out policies to reduce perinatal mortality of most vulnerable group [6].

Perinatal complications of antepartum haemorrhage include low birth weight, intrauterine death, and birth asphyxia. In a study by Jain S. et al in 2015 found that perinatal mortality in placenta previa cases was 29.6% (11.1% still birth & 18.5% neonatal death), while in placental abruption, it was 64.7% (41.1% still birth and 23.5% neonatal death). In patients with toxemia, perinatal mortality was 80% (70% still birth and 10% neonatal death). Non-toxemia and unclassified accounted for 58.3% and 25% cases respectively. The overall perinatal mortality being 47.02%, 75.9% of babies were low birth weight in cases of placenta previa while 76.47% in cases of placental abruption and perinatal mortality in low birth weight babies was 57.14% [6].

In another study by Patel M et al. in 2016, the incidence of antepartum haemorrhage was 1.4%. 71.4% patients had placenta previa while 28.6% were cases of placental abruption. 75% of babies were low birth weight and perinatal mortality rate was 43% for antepartum haemorrhage cases. Still birth (intrauterine fetal death) cases accounted for 66.6% of cases [7].

In another study by Kedar K et al. the incidence of placental abruption, placenta previa and unclassified haemorrhage in cases presenting with antepartum haemorrhage was 51.91%, 45.80% and 2.29% respectively. Low birth weight babies in placental abruption were 66.64% and in placental previa were 33.34%. Perinatal mortality was 20.59% in placental abruption and only 5% in placenta previa [8]. Tyagi P et al. in another study found perinatal mortality in antepartum haemorrhage to be 42 per 1000 live births. (40% of placenta previa cases and 47.3% of placental abruption cases) [9].

This study will evaluate the perinatal outcome in patients presenting with antepartum haemorrhage at Liaquat National hospital, Karachi. As very little local data is published in this topic, this study will help in identifying factors that affect perinatal outcome locally such as degree of antepartum haemorrhage or the neonatal intensive care facilities to look after low birth weight and asphyxiated neonates.

MATERIALS AND METHODS

This descriptive study was conducted at Department of Gynecology & Obstetrics, Liaquat National Hospital Karachi, during from 3rd November 2018 to 2nd May 2019. Total 132 patients with antepartum haemorrhage of 15-45 years of age were selected. Congenital anomalies detected on ultrasonography were excluded. 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 systemic examination. All parameters of maternal and fetal well-being were recorded. All cases with antepartum haemorrhage were evaluated and perinatal outcome of patients with antepartum haemorrhage was recorded including low birth weight, still birth and neonatal death.

All patients with APH 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 patient was monitored 4 hourly. A 4 hourly monitoring of pulse, blood pressure,

temperature and fetal heart sounds was done till the delivery and after assessing the outcome of the baby. Demographics, relevant clinical history, diagnosis and neonatal outcome were recorded by the principal investigator on a predesigned proforma (attached as Annexure “B”).

All patients were given 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.

Data was analyzed by SPSS version 23.0. Frequencies and percentages were computed for categorical variables like mode of delivery, education status, socioeconomic status and perinatal outcome (low birth weight/still birth/neonatal death). Quantitative variables were presented as mean ± standard deviation like maternal age, parity, gestational age and amount of bleeding per vagina.

RESULTS

Age range in this study was from 15 to 45 years with mean age of 28.94 ± 4.23 years. Majority of the patients 79 (59.85%) were between 15 to 30 years of age as shown in Table I.

Mean gestational age was 33.20 ± 3.92 weeks (Table II). Mean parity was 3.13 ± 0.89 shown in Table III. Distribution of patients according to socioeconomic status is shown in Table IV. Distribution of patients according to education level & mode of delivery is shown in Table V & VI respectively. Mean amount of bleeding per vagina was 845.33 ± 67.22 ml.

In this study, frequency of perinatal outcome in patients of antepartum haemorrhage was as follows; low birth weight was found in 71 (53.79%), stillborn in 56 (42.42%) patients and neonatal death in 23 (17.42%) patients as shown in Table VII.

Table-1: Age distribution of patients (n=132).

Age (in years)	No. of Patients	%age
15-30	79	59.85
31-45	53	40.15
Total	132	100.0

Mean ± SD = 28.94 ± 4.23 years

Table-2: Distribution of patients according to gestational age (n=132).

Gestational age (weeks)	No. of Patients	%age
24-32 weeks	32	24.24
33-42 weeks	100	75.76
Mean ± SD	33.20 ± 3.92	

Table-3: Distribution of patients according to Parity (n=132).

Parity	No. of Patients	%age
0-3	90	68.18
4-5	42	31.82

Table-4: Distribution of patients according to socioeconomic status (n=132).

Socioeconomic status	No. of Patients	%age
Poor	44	33.33
Middle	51	38.64
Upper	37	28.03

Table-5: Distribution of patients according to education level (n=132).

Education level	No. of Patients	%age
Illiterate	22	16.67
Primary	16	12.12
Secondary	24	18.18
Intermediate	43	32.58
Graduate	27	20.45

Table-6: Distribution of patients according to mode of delivery (n=132).

Mode of delivery	No. of Patients	%age
SVD	79	59.85
Cesarean section	53	40.15
Total	132	100.0

Table 7: Perinatal outcome in patients of antepartum haemorrhage

	Frequency (%)	
Perinatal outcome	yes	no
Low birth weight	71 (53.79%)	61 (46.21)
Stillborn	56 (42.42%)	76 (57.58%)
Neonatal death	23 (17.42%)	09 (82.58%)

DISCUSSION

APH complicates 0.5–5% of pregnancies which varies with sociodemographic variables [9-10]. The main causes of APH are placenta previa and abruptio placentae; however, the exact cause of bleeding in some cases may be undetermined.98 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 [11]. The overall prevalence in a study from Qatar was found to be 15.3% and poor education, family history of hypertension, G6PD, and Down's syndrome were found to be significantly associated with increased APH in that study [12]. However, in a study from Osun, South-Western Nigeria, the prevalence was 1.5% and the major cause of antepartum hemorrhage was found to be placenta previa followed by abruption and lastly by unknown causes [13]. In Lagos, Nigeria, an incidence of 3.5% was reported and placenta previa constituted 58.4% of the cases, while placental abruption was a factor in 35.6% [14].

In a comparison of maternal risk factors, research reports98 concluded that abruption is more likely to be related to conditions occurring during pregnancy (preeclampsia, abdominal trauma, intrauterine infections, prelabor rupture of membranes, polyhydramnios elevated maternal serum alpha-fetoprotein, smoking, and substance abuse) and placenta previa related to conditions existing prior to the pregnancy (uterine scar, manual removal of placenta, curettage, advanced maternal age, multiparity, and previous placenta previa).98 The precise cause of abruption is unknown; however, hypertension is the most consistent predisposing factor [15]. In a study conducted at the University of Oslo, age was studied as a significant sociodemographic characteristic, with mothers over the age of 40 years being significantly more likely to have severe hemorrhage [16]. On the other hand, maternal characteristics associated with lower sociodemographic status, namely low education was the main variable associated with APH in a study from Qatar [12].

Fetal complications are premature delivery, low birth weight, birth asphyxia, and intrauterine fetal death [16]. Up to one-fifth of very preterm babies are born in association with APH [11], and the known association of APH with cerebral palsy can be explained by preterm delivery. A retrospective observational study from Australia found that women with unexplained APH are at greater risk of preterm delivery, and their babies are more likely to develop hyperbilirubinemia [11]. Furthermore, women with unexplained APH were more likely to have smaller babies, and this difference remained statistically significant when the birth weight was adjusted for gestational age at delivery and other confounders [11].

I have conducted this study to determine the perinatal outcome in patients of antepartum haemorrhage. Age range in this study was from 15 to 45 years with mean age of 28.94 ± 4.23 years. Majority of the patients 79 (59.85%) were between 15 to 30 years of age. In this study, frequency of perinatal outcome in patients of antepartum haemorrhage was as follows; low birth weight was found in 71 (53.79%), stillborn in 56 (42.42%) patients and neonatal death in 23 (17.42%) patients.

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 [8]. 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 [9].

In a local study, 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 birth weight babies and stillbirth was 62.5% and 27.08% respectively [17]. In another study, IUD or still births were noted in 31% of the cases. Neoantal deaths were observed in 5.8%. Prematurity was the most common complication observed in the present study in 82.8% of the cases followed by neonatal jaundice which was observed in 51% of the cases. NICU admissions were present in 8.5% of the cases. In this study, 56% of the patients had an APGAR score of <7 at 1 min and 63% had an APGAR of 4 to 6 at 5 min. Maximum number of births had birth weight of 1.5-2 Kg. In previa 17, majority (39.2%) of births had birth weight of 1.5-2 Kg and in undetermined majority (66.7%) had birth weight of 2.5-3 Kg [18].

Jaju KG, et al., showed that 45.5% had either intrauterine death or still birth, and 4.5% were neonatal deaths [19]. Mukherjee, et al. reported higher (67.9%) still births or intra uterine deaths and Purohit A, et al. reported only 15.6% of IUD or still birth. Purohit A, et al. also reported 7% of neonatal deaths which was similar to the present study [20]. In the abruption group 53.57% and placenta previa 95% were live births. This was in contrast to Bako, et al. study where 61% of the births in patients with abruption were dead born [21]. Bhandiwad, et al [22] reported 85% of the births had wt <2.5 Kg. Adekanle, et al. only 25% had birth weight <2.5 kg [23].

CONCLUSION

This study concluded that the 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 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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