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"A STUDY OF ANTEPARTUM HEMORRHAGE: MATERNAL AND PERINATAL OUTCOME"

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ABSTRACT

OBJECTIVE: *To determine the maternal and perinatal complications in patients presented with antepartum hemorrhage (APH) at a tertiary care hospital so that a preventive strategy can be made to optimize fetomaternal outcome.*
METHODOLOGY: *This prospective descriptive study was conducted from September 2007 to august 2008 at Department of Gynaecology and Obstetrics unit II, Liaquat University Hospital, Hyderabad, Sindh, Pakistan. A total of 195 diagnosed cases of antepartum hemorrhage were included in the study after obtaining informed consent.*
RESULTS: *The incidence of APH was 5.4%. maternal and perinatal morbidity was very high with increased rates of caeserian section (57.1%), postpartum hemorrhage (19%), need of blood transfusion (77.4%), shock (6.66%), peripartum hysterectomy (1%), preterm delivery (79.16%) and maternal and perinatal mortality (3% and 49.7% respectively).*
CONCLUSION: *It was concluded that APH does stand out as a serious condition with manifestation of significant maternal and perinatal morbidity and mortality. These complications can be reduced by provision of antenatal care to every woman at their doorsteps and provision of family planning services to reduce family size hence complications.*

KEYWORDS: antepartum hemorrhage, maternal morbidity, maternal mortality, pregnancy

INTRODUCTION

Antepartum hemorrhage (APH) continues to be a major cause of maternal and perinatal morbidity and mortality even in modern day obstetrics. It is one of the most frequent emergencies in obstetrics occurring at a prevelance of 0.5-5%. APH is defined as vaginal bleeding from 24 weeks of pregnancy upto the delivery of the baby.
Maternal and perinatal complications in APH are malpresentation, postpartum hemorrhage, shock, blood transfusion, peripartum hysterectomy, preterm delivery and maternal and perinatal mortality.
The causes of antepartum hemorrhage can be divided into three main groups, placenta previa, placental abruption and others . Placenta previa exists when the placenta is inserted wholly or in part into the lower segment of the uterus.
An abruptio placentae is the condition whenever bleeding occurs due to premature separation of a normally sited placenta. Other causes are cervical polyp, Carcinoma cervix; local lesions of vagina and cervix, systemic diseases like leukemia are rare causes of APH.
Maternal complications of APH are malpresentation, premature labour, postpartum hemorrhage, shock, retained placenta . It also includes higher rates of caeserian sections, peripartum hysterectomies, coagulation failure and even death. Fetal complications are premature delivery, low birth weight, intrauterine death, congenital malformations and birth asphyxia[8].
This study is aimed at determining the maternal and perinatal effects of antepartum hemorrhage in a tertiary care hospital. Findings arising from this study may be used to gauge the severity of this problem so that a management and preventive protocol can be established to avert possible fatal maternal and perinatal outcome.

MATERIAL & METHOD:

This prospective observational study was conducted at Department of Obstetrics & Gynaecology Unit II, Liaquat University Hospital Hyderabad, from 1st September 2007

to 31st august 2008. All patients who presented with antepartum hemorrhage were included in this study after a obtaining informed consent. Using a predesigned proforma, data was collected including maternal age, parity, gestational age at presentation, booking status and residence of patients and severity of hemorrhage. General physical examination and per abdominal examination were carried out. Routine and specific investigations were sent. Management was planned according to the clinical condition of the patient, degree of hemorrhage, duration of pregnancy and viability of fetus. Resuscitative measures were taken in moderate to severe hemorrhage and pregnancy was terminated. Maternal and perinatal complications were recorded. All data was collected on a predesigned proforma and analysed using spss version 10. This helped prepare statistically sound and analytically appropriate foundations for a robust analysis of the results.

RESULTS:

During the study period (from 1st September 2007 to 31st august 2008.) there were 195 cases of antepartum hemorrhage out of 3600 maternal admissions in the hospital giving an overall incidence of 5.4%. 23% patients were booked and 77% were unbooked. Out of 195 cases of APH, 168 delivered and 27 patients that presented with mild bleeding were managed expectantly and discharged undelivered when bleeding settled down.

Out of 168 deliveries there were 3 twin deliveries thus total number of babies delivered were 171. As shown in figure I, the demographic statistics indicated that the women were in the age group of 18-40 years with maximum number 99 (50.7%) in the age group of 26-30 years with mean age 30.0 years. 15 patients were nulliparous while maximum number (57.9%) were with parity 1-4. figure II.

It was further observed that 133 out of 168 women (79.1 %) delivered preterm with maximum deliveries at gestational age 33-36 weeks. Figure III Malpresentation was present in 19 patients (9.7%). Out of 19 women 11, 2, and 6 had breech, transverse, and oblique lie respectively. More than half of the women that are 101 (51.7%) had placenta previa and 87 (44.6%) women were diagnosed as abruptio placentae. 2 women (1%) of uterine rupture presented with APH. In 5 women (2.5%) no cause was found. Studying maternal complications (Table I), Caesarian section rate was very high that is 96 out of 168 deliveries (57.1%) accounting for 8% of all caesarian operations performed in the year. A total of 77.4% women needed blood transfusion with

FIGURE I:
AGE DISTRIBUTION OF THE CASES

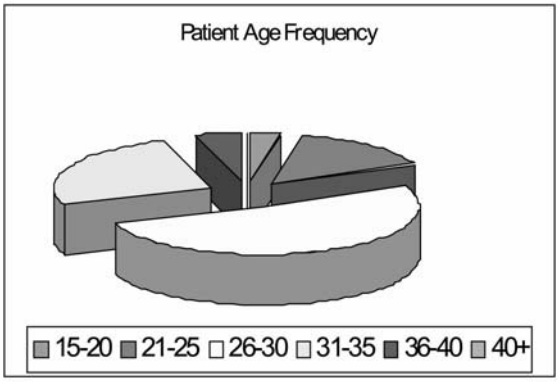


FIGURE II:
PARITY OF THE PATIENTS

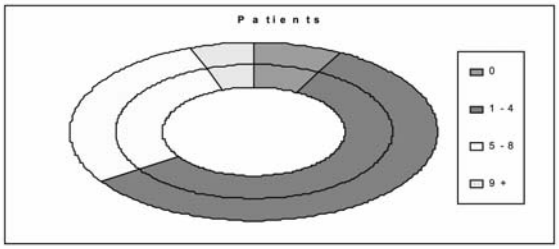


FIGURE III:
GESTATIONAL AGE AT PRESENTATION

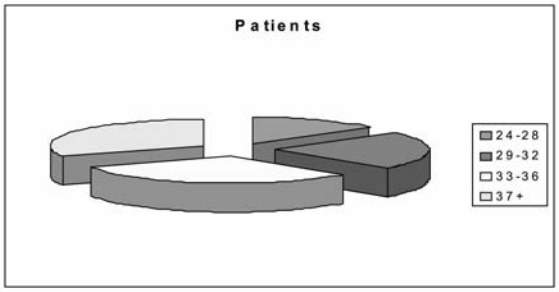
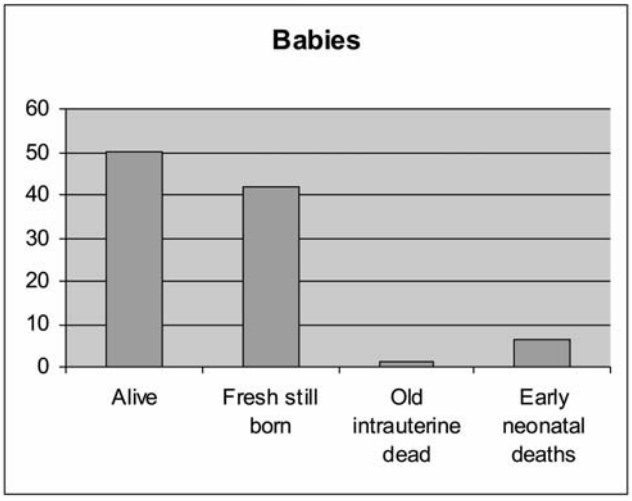


FIGURE IV:
PERINATAL OUTCOME



massive transfusion that is upto 10 units of blood required in 2 patients. PPH occurred in 32 (19%) patients. Two women ended in hysterectomy due to PPH. Out of the total number of cases, 6 (3%) women died in one-year period due to APH, contributing to 15.3% of the total maternal deaths in the period. Abruptio complicated by coagulation failure, was present in 3 patients,2 had placenta previa who presented very late in state of irreversible shock and 1 had uterine rupture who presented with APH.

Perinatal outcome data revealed that out of 171 babies born, 133 were preterm (79.1%), 72 (42.10%) were fresh stillborn, 11 (6.4%) were neonatal deaths, 2 (1.16%) were old intrauterine dead fetuses and 86 (50.2%) were discharged from hospital alive. figure IV

TABLE I:
MATERNAL MORBIDITY AND MORTALITY

MATERNAL COMPLICATION	NO OF PATIENTS	%
Blood transfusion	151	77.43
Caesarian section	96	57.14
Postpartum hemorrhage	32	19.0
Peripartum hysterectomy	2	1.19
Shock	13	6.66
death	6	3.0

DISCUSSION

Bleeding in late pregnancy is an important cause of fetal and maternal morbidity and mortality. Every report of confidential enquiry into maternal death in England and Wales has featured massive hemorrhage as a cause of maternal death. According to world health organization estimates, 25% of all maternal deaths are due to hemorrhage. Although the incidence has substantially decreased, hemorrhage still remains a major cause of mortality. Studies from other countries and near miss investigations indicate that life-threatening hemorrhage occurs in 1 in 1000 deliveries, which is equivalent to an incidence of around 600 cases of hemorrhage in UK every year. The incidence of APH reported from this study is quiet high, that is 5.4%, while it is quoted to be 2-5%, 3.01% and 2.53% in other studies from other parts of the world,' . The high incidence of APH in the study may be because of large number of referred cases to a tertiary care centre, but still this may be an underestimate of actual figure as many patients with hemorrhage fail to reach to hospital in time or a multitude of cases do not report to any hospital at all. The booking status in the current study is only 23%, similar to a study done in Saudi Arabia. Out of the rest 77%, most had not received antenatal care from anywhere. This clearly shows the importance of antenatal care in prevention and early detection of antepartum hemorrhage to reduce morbidity and mortality.

In a study conducted at university of oslo, age was studied as a significant risk factor with mothers over the age of 40 years being significantly more likely to have severe hemorrhage. But in our study, mean age of the patients is 30 years, similar to the study done in another tertiary care hospital of sindh. The reason may be practice of early marriages in our society. Incidence of APH is more in multipara (92.3%) as compared to nullipara (7.6%). So being a problem of multiparity, reduction in family size and the issues of contraception are highly applicable if the incidence and associated morbidity and mortality are to be reduced. Blood transfusions do expose the patient to the risk of transfusion reactions such as jaundice and contacting infectious diseases such as hepatitis B. On the contrary, a delay in the correction of hypovolaemia can be fatal in cases of hemorrhage. This is shown in very high rates of blood transfusions in this study and other studies as well[16].

The incidence of postpartum hemorrhage is 19%, which is almost the same as mentioned by crane et al. Commonest cause of PPH was uterine atony, followed by coagulation failure. Caeserian section rate is very high in this study (57.1%), contributing to 8% of all caeserian operations. Hhysterectomy with consequent loss of fertility is common sequelae in women with postpartum hemorrhage. Both the patients who ended up in peripartum hysterectomy due to postpartum hemorrhage survived with timely management, though with a longer postoperative hospital stay. Maternal mortality in this study is 3%, contributing to 15.3% of the total maternal deaths, while mortality quoted by another study due to hemorrhage is 20%. The cause is that mostly patients reported to the hospital very late, so that there was a very short window of opportunity for intervention to promote a successful outcome. But in some patients, coagulopathy appears not to have been managed aggressively enough and was compounded by the fact that prompt availability of blood and therapy for DIC was lacking despite having an on-site blood bank.

Considering the perinatal outcome, 79.16% women had preterm deliveries, which is almost the same as found in various other studies'. In most of the cases delivery was iatrogenic in maternal interest.

Perinatal mortality was 50.2%, contributing to 49.8% of all perinatal deaths, while other studies from sindh have quoted 41.6% and 20% perinatal mortality in cases of antepartum hemorrhage'. 42.10% were fresh stillborns indicating that severe hemorrhage and hypovolemic shock on arrival exposed the fetuses to hypoxia and ultimately death and this again proves the importance of early and rigourous management of antepartum hemorrhage.

CONCLUSIONS AND RECOMMENDATIONS

Based upon observations made during this study, it is concluded that APH is as a serious condition with significant maternal and perinatal morbidity and mortality. Based on observation from this study, following recommendations need to be considered:

- The pregnant women admitted with antepartum hemorrhage should be considered at very high risk and timely management should be given by a trained team.
- Public sector hospitals should be equipped with requisite materials including round the clock availability of blood and blood products. And postgraduate training should also be given in hematology as well.
- Family planning should also be emphasized as a strategy towards reduction of parity and thereby the incidence of antepartum hemorrhages.
- Considering very high perinatal mortality, neonatal care units should further be improved and pediatric facilities should be beside labour ward.

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