Original Article

Antepartum Haemorrhage

A Survey of Pregnancies Complicated by Antepartum Haemorrhage

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ABSTRACT

Objective: To find out the demographic profile, type of antepartum haemorrhage, maternal and perinatal complications and maternal and perinatal mortality.
Study Design: Prospective study
Place and Duration of Study: This study was a carried out at Gynae B, Labour Room, Khyber Teaching Hospital Peshawar for a period of one year from January 2013 to December 2013.
Materials and Methods: This study was carried over on patients who presented to gynae B labour room Khyber Teaching Hospital Peshawar with antepartum haemorrhage. All the patients were admitted and relevant informations including age, parity, booking status, education, residence and occupation etc. were noted in the study proforma. Patients were followed till discharge.Records about mode of delivery, intrapartum and postpartum complications were made. Details of the babies like weght, sex, maturity, apgar score, whether live or dead were recorded and data analyzed.
Result: Incidence of ante partum haemorrhage was 3.01% Maternal and perinatal morbidity was very high with increase rates of anaemia (100%) cesarian section rates (68%) post partum haemorrhage (11.5%), need of blood transfusion (100%). Puerperal pyrexia (13.1%) coagulation failure (11.5%) low birth weight (36%) and birth asphyxia. Maternal and perinatal mortality was very high(2.1%) and (37%) respectively.
Conclusion: Antepartum haemorrhage is a grave obstetrical emergency associated with very high maternal and perinatal mortality and morbidity.
Key words: Antepartum Haemorrhage, Perintal Mortality and Morbidity. Placental Abruption, Placeta Praevia.

INTRODUCTION

Antepartum haemorrhage is a grave obstetrical emergency and major contributor to maternal and perinatal mortality and morbidity. Antepartum haemorrhage complicates 2 to 5% of pregnancies and is defined in some literature as bleeding from or into genital tract after 20 weeks of gestation until delivery in industrialized countries [1] (Amitava et al., 2010) and 28 weeks in countries with low resource settings, lacking adequate neonatal care facilities and one of the major contributors to obstetric emergencies in our health facilities [2] (Lamina and Oladapo,2011). Identifiable causes of antepartum haemorrhage are recognized in 50% of cases, and in other 50% the causes are unknown despite an exhaustive search to determine aetiology of bleeding. The main causes of antepartum haemorrhage are placenta praevia (31%) and placental abruption (22%).The other causes (47%) include marginal sinus bleeding 60%,heavy show (20%), vasa praevia (0.5%), cervicitis (8%), genital trauma (5%),varicosities (2%), tumours, infections and coagulation defects 0.5% each [3] (Chan andTo,1999).

Antepartum haemorrhage contributes significantly to maternal and perinatal mortality and morbidity.[3] Blood loss is often underestimated and the amount visible may only be a portion of the total volume of haemorrhage. (e.g with a concealed placental abruption).Women with a history of antepartum haemorrhage are at increased risk of adverse perinatal outcomes including small for gestational age, congenital anomalies, intrauterine growth restriction, and birth asphyxia, therefore initiation of serial ultrasound is recommended.[5,6] Other risks include oligohydramnias, premature rupture of membranes, preterm labour, labour induction, cesarean delivery, puerperal pyrexia, sepsis, shock, disseminated intravascular coagulation, anaemia retained placenta, postpartum haemorrhage and increased maternal mortality.[5,6]

Placenta praevia is defined as placenta that lies wholly or partially in the lower uterine segment. The prevalance of clinically evident placenta praevia at term is estimated to be approximately 4 or 5 per 1000 pregnancies.[7,8,13] Classically placenta praevia is divided into four types or grades. Type 1 and type 2 are regaded as minor and type 3 and 4 are regarded as major degrees of placenta praevia.Care must be taken not to confuse these grades with grades of placental maturity. Ultrasound remains the method of choice in diagnosing placenta praevia.[7,8,13]

Placenta praevia is classified as follows:

Type1: The placenta encroaches into lower uterine segment and lies within 5cm of internal cervical os.

Type2: The placenta reaches cervical os but does not cover it.

Type 3: The placenta covers the cervical os but the placental site asymmetric with most of the placenta being on one side of the cervical os.

Type4: The placenta is completely covering the cervical os.

Classification of placenta praevia is important in making management decision as the incidence of

maternal and foetal mortality and morbidity increases as the grades of placenta increases. The classification is difficult to use in practice, because the definition of lower uterine segment is more conceptual than anatomical. In any case with the availability of ultrasound, this classification has become obsolete. Currently the condition is diagnosed with ultrasound.

In the report of confidential inqiueries into maternal mortality over 2000-2002 in UK (why mothers die 2000-2002), there were 17 maternal death due to haemorrhage. Out of these 17 deaths, 4 were due to placenta praevia.[13]

Placental abruption is premature separation of normally situated placenta from the uterine wall resulting in haemorrhage before the delivery of the foetus.[9,10,13] Placental abruption is diagnosed clinically and is unpredictable. The management has changed little over the recent past. It occurs in around one in 80 deliveries and remains a significant source of perinatal mortality and morbidity.[9.10,13] Recent large epidemiological study reports an incidence ranging from 5.9 to 6.5 per 1000 singleton births and 12.2 per 1000 twin births. Perinatal mortality reported to be is119per 1000 births complicated by abruption. The risk of abruption recurring in subsequent pregnancies is increased as much as 10 fold.[9,10,13]

Placental abruption is graded as follows:

0: Anasymptomatic retroplacental clot seen after placental delivery.

1: Vaginal bleeding and uterine tenderness, visible retroplacental clot after delivery.

2: Revealed bleeding may or may not be present, but placental separation is significant enough to produce evidence of foetal compromise and retroplacental clot visible after delivery.

3: Revealed bleeding may or may not be seen, but there are significant maternal signs (uterine tetany, hypovolumia, abdominal pain),with late stage foetal compromise or foetal death.30% of these women will develop disseminated intravascular coagulation (DIC).

Abruption has historically been associated with poor maternal and foetal outcomes. In the last Confidential Enquiery into maternal deaths, two deaths were due to abruption, though these were not thought to have been preventable.[13]

Vasa praevia is the presence of unsupported foetal vessels below the foetal presenting part, where the cord insertion is velamentous.[11,13] It is rare but consequences are disastrous if not diagnosed prenatally. Vasa praevia has an incidence of approximately one in 6000 deliveries.[13] Oyeles et al, demonstrated the importance of prenatal diagnosis. In the group where prenatal diagnosis had been made, 97%survived as opposed to only 44%, where the diagnosis had not been made before birth. The diagnosis of vasa praevia can be confirmed by Doppler and endovaginal ultrasound studies if aberrant vessels are seen running over internal cervical os.

The exact cause of bleeding in late pregnancy is unknown in about half of the cases.[5,6,13] The women typically presents with painless vaginal bleeding without ultrasound evidence of placenta praevia. In a small proportion of cases where placenta praevia and abruption has been excluded, a cause may still be found. They include heavy show, cervicitis, trauma, genital tract tumours, infections, varicosities and haematuria. Many of these conditions are evident on speculum examination.

Maternal mortality due to antepartum haemorrhage has significantly decreased in developed countries due to better obstetrical outcome. In Pakistan maternal and perinatal mortality is still very high due to associated problems like anaemia, difficulties in transport in case of emergency and restricted medical facilities. Present study was planned to study maternal and perinatal outcome in patients of antepartum haemorrhage at tertiary care referral hospital.

MATERIALS AND METHODS

This is prospective study carried over a period of one year from Jan2013 to Dec 2013 on patient who presented to Gynae B labor room Khyber teaching Hospital Peshawar with antepartm haemorrhage. All the patients with antepartum Haemorhage were admitted and emergencies resuscitative measure taken if needed. Relevant information including age , parity , booking status, education, occupation and residence of the patients were noted in the study performa. Patients were followed till discharged. Record about mode of delivery, maternal complication, prceclampsia, malpresentation, anaemia, retained placenta or placenta accreta, postpartum haemorrhage need of blood transfusion and puerperal sepsis etc. were analyzed. Details of babies like weights, Sex, maturity apgar score whether live or dead were recorded and then all data analyzed.

RESULTS

Results are shown in table 1 to 6. There were total of 3085 deliveries during one year and 95 patients had antepartum Haemorrhage during the study period. So, the incidence of antepartum haemorrhage was 3.07%.Out of 95 deliveries, one woman had twin delivery while two had hystrotomy for previable fetuses with severe abruption, thus total number of babies delivered were 94.The women were in the age group of 18 – 40yrs, maximum number 50(52%) were in the age group of 28-40, while the rest were in age group of 18-28 85% women were multigravida while only 10% were primigravida. All women were from rural areas except for five women who came from urban areas. Out of the total 95 women only 9 were registered. Malpresentations were present in 9 women. Out of

these 9 women 5 and 4 were breech and transverse lie respectively. All the women were anaemic (haemoglobin less than 11gm%).7%had haemoglobin level less than 5gm%.More than half of the women had placenta praevia and about one fourth had abruptio placenta.13 cases of placenta praevia were associated with previous lower segment cesarean section. Out of these 13 cases 6 were associated with placenta accreta. 5 of six cases underwent hysterectomy for intrapartum haemorrhage. One case of placenta praevia with previous 4 cesarean section and accreta was complicated by bladder trauma and later on fistula formation. One other got expired due to severe intrapartum haemorrhage. One case of placenta accreta received post op methotrxate therapy and was cured. It was a small chunk morbidly adherent to endometrium, so left as such. This was later on expelled spontaneously after methotrexate therapy without any complication of postpartum haemorrhage. Cesarean section rate was very high (68%).50% were for placenta praevia and 15% were for abruption. Out of those 50% one c. section was for unclassified severe antepartum haemorrhage and 2 were for type 1 placenta praevia with severe haemorrhage. The rest were for type2, 3and 4 placenta praevia.40babies were transferred to nursery. Out of these 11 babies got expired, 4 left against medical advice and the rest discharged alive. All the women needed blood transfusion. The need for blood transfusion was one unit, two units,three units and more than three units in ten, fifty, twenty and fifteen women respectively. Three women had hysterectomy for postpartum haemorrhage due to couvalaire uterus. Two women who died,one had abruptio placenta complicated by disseminated intravascular coagulation, other had placenta praevia with accreta who went into irreversible shock due to severe intrapartum haemorrhage.

Table No.1: Demographic profile of women with Antepartum haemorrhage.

Parameter		Number of women	%age
Booking Status	Unregistered	86	90.5%
	Registered	9	10.2%
Residence	Rural	90	94.7%
	Urban	5	5.2%
Parity	Primi	10	10.5%
	Multi	85	89.4%
Occupation	Housewife	80	84.2%
	Labourer	11	11.5%
	Service	4	4.2%
Education	Illiterate	90	94.7%
	Matric	3	3.15%
	Higher	2	2.1%

Table No.2: Types of Antepartum haemorrhage

Parameter	Number of women	Percentage
Placenta Praevia	63	66.3%
Type 1 p.praevia	17	26.9%
Type 2 p.praevia	11	17.4%
Type 3 p.praevia	4	6.3%
Type4p.praevia	31	49.2%
Abruptio placentae	25	26.3%
Vasapraevia	0	0%
Unclassified Hemorrhage	3	3.15%
Accreta	6	19.3%

Table No.3: Details of Babies

Parameter	Number of women	Percentage
Maturity		
Less than 34 weeks	25	26.3%
34----------37weeks	15	15.7%
More than 37 weeks	55	57.8%
Weight of the babies		
Less than 1.5kg	7	7.3%
1.5---------2.5kg	33	34.7%
More than 2.5kg	55	57.8%
Perinatal mortality		
Stillbirth	25	26.3%
Died in nursery	11	11.5%
Alive	59	62.1%
Sex(male)	60	63.1%
Female	34	35.7%

Table No.4: Maternal Complications

Parameter	Number of women	Percentage
Post partum haemorrhage	11	11.5%
Blood transfusion	95	100%
Coagulation Failure	11	11.5%
Puerperal Pyrexia	13	13.6%
Maternal mortality	2	2.1%
Lower segment c.section	65	68.4%

Table No. 5: Perinatal complications:

Parameter	Number of women	Percentage
Low birth weight	35	36.8%
Prematurity	40	42.1%
Low Apgar score	29	30.5%
Iugr	2	2.1%
Shifted to nursery	40	42.1%
Perinatal mortality	36	37%

Table No.6: Associated Obstetrical conditions

Disorder	Number of women	Percentage
Anaemia	95	100%
Pre-eclampsia	15	15.7%
RH-negative	11	11.5%
Multiple pregnancy	1	1.05%
IUGR	2	2.1%s
Malpresentation	9	9.4%
Prematurity	40	42.1%
Previous C.Section	13	13.6%
Previous 1	7	7.3%
Previous 2	1	1.05%
Previous 3	3	3.1%
Previous 4	2	2.1%

DISCUSSION

There were 95 women with antepartum haemorrhage and incidence was 3.07% which is almost same as that of Arora et al, who reported 2.53% incidence of antepartum haemorrhage. Mean age was 28yrs, which is the same as the study of Das et al.Incidence of antepartum haemorrhage was more in multigravida (85%) than primigravida (10%).Other studies have also reported high incidence of antepartum haemorrhage in multipara, which was about 5-8 times higher than primigravida.40%women had preterm delivery while Silver et al and Cotton et al observed very high association of prematurity with antepartum haemorrhage of the range of 70% and 77.5% respectively. Incidence of blood transfusion was very high (100%) in the present study while Brenner et al and Willikan et al repoted 36% and 52.4%incidence of blood transfusion respectively. Very high rates of blood transfusion in the present study might be due to reasons that all patients were already anaemic at the time of admission.11%women had postpartum haemorrage (PPH) which is less than shown in study by Crane et al. (21%).Maternal mortality in the present study was 2.1%(2deaths) which is consistent with the study of Motwani et al.40% babies were low birth weight, while Arora et al and Khosla et al reported 77% and 66% low birth weight babies respectively. There were male predominance in the present study, 60% males and 34% females. Similar male predominance in antepartum haemorrhage is observed by other authors. The reason for this association is not clear. Perinatal mortality was 37% while other authors like Arora et al and Khosla et al reported a very high perinatal mortality rate of 61.3% and 53.5% respectively. There was very high maternal morbidity with increased rates of anaemia, postpartum hemorrhage, blood transfusion, cesarean section rate, puerperal pyrexia, sepsis, shock and coagulation failure. Similarly perinatal morbidity was very high in the form of low birth weight babies, Iugr and birth asphyxia

CONCLUSION

Antepartum haemorrhage was found to be associated with poor maternal and neonatal outcome in this study and the major predictor was booking status. There is need to improve on infrastructures, such as functional blood banks, quality of care and referral system in our health facilities to be able to cope with increasing challenges of this obstetric haemorrhage.

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