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Original Research Article

A Retrospective Review of Antepartum Hemorrhage and its Impact on Maternal and Fetal Outcomes

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Abstract:

Introduction: Antepartum haemorrhage (APH) is defined as bleeding from or into the genital tract, occurring from 20 weeks of pregnancy and prior to the birth of baby. On an average 3-5% of all pregnancies are complicated by antepartum haemorrhage. Therefore, we conducted this study to evaluate factors associated with antepartum haemorrhage and retrospective evaluation of maternal and fetal morbidity and mortality.

Material & Methods: This is a retrospective hospital-based study carried out from the period November 2017 onwards and included 400 cases. Antepartum haemorrhage is defined as bleeding from or into the genital tract, occurring from 20 weeks of pregnancy and prior to the birth of the baby.

Results: Mean age in study group was 25.85±5.13 years ranging from 19-41 years. 269 and 131 cases belonged to rural and urban area respectively. Mean gestational age was 35.34±3.46 weeks ranging between 20-41 weeks. In present study, 344 cases had LSCS delivery while 27 cases were delivered normally, 25 cases had hysterectomy while 4 cases had LSCS followed by hysterectomy. Abruptio type was present in 194(48.5%), placenta previa was present in 196(49%) of cases while other was present in 10(2.5%) of cases.

Conclusion: In this study we found that the incidence of APH is more in multigravida (66.7%) than in primigravida.

Keywords: Multigravida, Gestational Age, Hysterectomy.

Introduction

Antepartum haemorrhage (APH) is defined as bleeding from or into the genital tract, occurring from 20 weeks of pregnancy and prior to the birth of baby [1]. On an average 3- 5% of all pregnancies are complicated by antepartum haemorrhage [1,2]. Obstetric haemorrhage accounts for 22- 25% of maternal mortality and amongst this antepartum haemorrhage is the most common cause of morbidity and mortality accounting for half of the deaths [2]. Etiology includes placenta previa, abruptio placentae, local causes, systemic causes and idiopathic origin. Placenta previa refers to a placenta situated partially or completely within the lower uterine segment. Incidence is 4-5 per 1000 pregnancies [2,3]. Haemorrhage is one of the leading causes of maternal mortality and morbidity. According to centre for disease control and prevention, haemorrhage was a direct cause of maternal death in about 30% of cases. APH can be due to placenta previa, abruptio placentae, indeterminate cause or local causes. Antepartum hemorrhage (APH) complicates about 2-5% of all the pregnancies, with incidence of Placenta previa (PP) about 0.33% [4] to 0.55% [5] and incidence of Abruptio placentae (AP) about 0.5-1% [6]. Maternal complications in patients with APH are malpresentation, premature labor, postpartum hemorrhage (PPH), sepsis, shock and retained placenta. Various fetal complications are premature baby, low birth weight, intrauterine death, congenital malformation and birth asphyxia [7]. Maternal mortality due to APH has significantly decreased in developed countries to about 6/100000 live births due to better obstetrical outcome. In India, maternal mortality is still very high and is 4.08/1000livebirths8. In developing countries widespread pre-existing anemia, difficulties with transport, restricted medical facilities, decreased awareness on part of patient and relatives are largely responsible for high MMR (Maternal Mortality Rate). Perinatal mortality is less than 10 per 1000 total births in developed countries while it is much higher in India 60/1000 total births [8]. Although APH cannot be prevented but maternal and perinatal morbidity and mortality associated with APH can be reduced significantly by aggressive expectant management. Presently increasing use of ultrasonography (USG) for placental localisation and to diagnose abruptio placentae, improved obstetrical and anesthetic facilities, increasing use of blood and its products to correct anemia and advanced neonatal care facilities to make increased

chances of survival of a preterm infant, all collectively have played important role in decreasing perinatal as well as maternal morbidity and mortality [9]. Risk factors for placental abruption include advanced maternal age, multiparity, low body mass index (BMI), abruption in a previous pregnancy, pre-eclampsia, polyhydramnios, intrauterine infection, premature rupture of membranes, abdominal trauma, smoking, drug misuse (cocaine and amphetamines), pregnancy following assisted reproductive techniques and maternal thrombophilias [10].

Material and Methods

This is a retrospective hospital-based study was carried out in Department of Obstetrics and Gynecology at Darbhanga medical college and Hospital Laheriasarai, Darbhanga. This study was carried out from the Two years. onwards and included 400 cases. Data were collected from the postoperative and postpartum wards and were analyzed as per proforma. Patients admitted with complaint of bleeding per vaginum occurring from 20 weeks of pregnancy and prior to the birth of the baby and delivery. Patient admitted with complain of bleeding per vaginum before 20 weeks of pregnancy, bleeding due to vaginal trauma and bleeding disorders were excluded.

Antepartum haemorrhage is defined as bleeding from or into the genital tract, occurring from 20 weeks of pregnancy and prior to the birth of the baby. The names and hospital numbers were carefully cross-checked to ensure that there is no repetition. The total number of deliveries during the study period was obtained from the statistics unit of the records department. Data relating to demographic status, referral status, ANC booking status, gestational age, and obstetric and medical complete history were taken. Baby details, mode of delivery, and the maternal and fetal outcome were extracted and were entered into a proforma designed for the study. The collected data were entered into Microsoft Excel and were analyzed with the help of appropriate software and tests of significance considering the level of significance as $p < 0.05$. Results were presented in tabular form.

Results

Antepartum hemorrhage (APH) has always been one of the most feared complications in obstetrics. Vaginal bleeding at any stage of pregnancy is a matter of great concern for patient as well as her doctor. Antepartum haemorrhage (APH) is defined as bleeding from or into the genital tract, occurring from 20 weeks of pregnancy and prior to the birth of baby[1]. Etiology of antepartum haemorrhage includes placenta previa, abruptio placentae, local causes, systemic causes and idiopathic origin. So we conducted the study to evaluate factors associated with antepartum haemorrhage and retrospective evaluation of maternal and fetal morbidity and mortality. Out of total 149 cases who were referred to our hospital, no patient reached at hospital within 30 minutes while only 3 patients reached to between 30-59 minutes while 4 patients reached at hospital for between more than 4 to 12 hours and majority of patients (n=142) reached at hospital between 1 to 4 hours (Table 1). In present study, 267 cases were multigravida while remaining 133 females were primi gravida (Table 2). In present study, 4 cases had received treatment for infertility, 66 cases had gestational hypertension, 1 case had pre-eclampsia, 15 cases were smoker or had history of smoking, 33 cases had history of previous D&C, 33 cases had previous LSCS while 5 cases had hypothyroidism (Table 3). According to maternal outcome, massive blood transfusion was present in 54 of cases, PPH was present in 21 cases, infection was present in 8 cases, 2 cases had DIC, 2 cases had Bladder rent repair, 4 cases had Hysterectomy and mortality of 3 cases (Table 4). According to fetal outcome, 335(83.8%) cases were live birth while still birth was present in 65(16.2%) cases (Table 5).

Table 1: Distribution of cases according to time to reach hospital after referral

Time to Referral	No. of Cases	Percentage
<30 min	0	-
30-59 min	3	2.0
1-4hr	142	95.3
>4-12hr	4	2.7
>12 hr	0	-
Total	149	100

Table 2: Distribution of cases according to gravida

Gravida	No. of Cases	Percentage
Primigravida	133	33.3
Multigravida	267	66.7
Total	400	100

Table 3: Distribution of cases according to maternal complications

Maternal Complication	No. of Cases	Percentage
Massive Blood Transfusion	54	13.5
PPH	21	5.3
Wound Infection	8	2.0
Hysterectomy	4	1.0
Death	3	0.8
DIC	2	0.5
Bladder Rent Repair	2	0.5

Table 4: Distribution of cases according to fetal outcome

Fetal Outcome	No. of Cases	Percentage
Live Birth	335	83.8
Still Birth	65	16.2
Total	400	100

Discussion

The present study is a retrospective study conducted in the Department of Obstetrics and Gynecology of DMCH Laheriasarai, Darbhanga. Study duration is Two years. onwards till the completion of 400 cases. Patients with complain of bleeding per vaginum from 20 weeks of pregnancy till the delivery of the baby were recruited in the study. Data collected was analysed to assess the associated risk factors with APH to evaluate maternal and fetal morbidity and mortality. The study shows maximum population cases 95.3% reached the hospital between 1-4 hours of duration and none of the patient reached within 30 minutes of referral. The study shows 63.3% patients were not in labor, while 28.1% were in latent phase, 8% were in the active phase of labour (Table 1). In this study we found that APH was more in multigravida (66.7%) than in primigravida. This is comparable with the results of study done by Yadav et al [11] which found to be 80% in multigravida and according to Chandnani and Rutwa [12] it was 71%. This may be attributed to the endometrial damage caused by repeated childbirth (Table 2).

In present study, gestational hypertension and pre-eclampsia contributed as risk factors among 24.2% cases of abruptio placenta while 10.2% in placenta previa. History of previous LSCS and previous D&C was more associated with placenta previa i.e. 23% as compared to 11% in cases of abruptio placenta. Other major risk factors for abruptio placenta were smoking (7.7%) and hypothyroidism (1%) while for placenta previa other risk factors were infertility 2% (Table 3). In present study, PPH present in 21(5.3%) of cases in which maternal mortality was observed in 3(0.8%) of cases due to severe haemorrhage and hypovolemic shock and hysterectomy was done in 4(1%) cases. This is nearly similar to Tyagi et al [13] where hysterectomy rate was 3.5%. Other complication that patients developed was massive blood transfusion (n=54), DIC 2 cases & bladder rent repair 2(0.5%) cases each and wound infection in 8(2%) cases. In our study maternal mortality was observed 3(0.8%) of cases which is similar to Pedowitiz et al [14] where they observed mortality rate 0.9% and Laxmipriya et al [15] 0.46%, Mourya et al [16] 4% and Tyagi et al [13] (6%) (Table 4). In our study, fetal outcome 83.8% live birth which is similar to Jharaik et al [17] (88.4%) and in present study, 16.2% still birth were also observed and this is similar to Yadav et al [11] where they found still birth in 17.8% and Laxmipriya et al [15] (14.6%). In other studies like Kaushal [18] found still birth in 12.96%, Mourya et al [16] in 12.69% and Jharaik et al[17] in 11.4% cases (Table 5).

Conclusion

APH is associated with maternal and perinatal morbidity and mortality and cannot reliably be predicted. It is a good practice to avoid vaginal examination and to advise to avoid penetrative sexual intercourse if placenta previa is diagnosed. All women presenting with APH should be assessed to establish whether urgent intervention is necessary to manage maternal or fetal compromise. Multi- disciplinary approach and senior input is necessary in making decision about timing and mode of delivery. In this study we found that the incidence of APH is more in multigravida (66.7%) than in primigravida. All women with APH heavier than spotting and women with ongoing bleeding should be recommended hospital stay at least until the bleeding is stopped. The pregnancy should receive continue care following APH from placental abruption or unexplained APH, and serial ultrasounds for the monitoring of fetal growth are recommended.

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