

## Outcome of Delivery of Patients Presenting With Antepartum Haemorrhage in Dhaka Medical College Hospital

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### Abstract

**Background:** Antepartum haemorrhage (APH) is defined as bleeding from or into the genital tract, occurring after 28th weeks of pregnancy and prior to the birth of the baby. The most important causes of APH are placenta praevia and placental abruption.

**Objective:** To assess the outcome of delivery cases presenting with antepartum haemorrhage in Dhaka Medical College Hospital.

**Material and methods:** It was a cross sectional study carried out in the department of Obstetrics & Gynaecology, Dhaka Medical College Hospital, Dhaka from January 2014 to December 2015. Total 100 sample were included in this study. All pregnant patients presented with P/V bleeding after 28 weeks & during labour were included in this study. Data were analyzed using statistical package for social science (SPSS) for windows version 20.

**Results:** This study shows majority (39%) of patients were from 21 -25 yrs of age group and only one (1%) patient from >36 yrs. of age group. Among caesarean section of 82(82.0%) patients, 69(84.14%) fetus were live birth, 18(21.95%) fetus were still birth, 4 neonatal death and a total perinatal death were 22(26.82%). Out of 18(18.0%) vaginal delivery, live birth were 13(72.22%), still birth were 5(27.77%), neonatal death were 2(11.01%) with a total perinatal death of 7(38.8%). So the mode of delivery by caesarean section in APH patients was better than that of the vaginal delivery. Regarding outcome of mother, 83(83.0%) patients were healthy, 17(17.0%) patients developed morbidity and 2(2%) died due to complication. Among 17 patients with morbidity, 4(4.0%) had shock, 9(9.0%) developed postpartum haemorrhage, 2(2.0%) developed wound dehiscence and 2(2.0%) developed disseminated intravascular coagulation.

Ultimately patients with disseminated intravascular coagulation died.

**Conclusion:** As antepartum haemorrhage is not preventable, but maternal outcome and fetal outcome can be improved by regular antenatal check up, monitoring of maternal haemoglobin concentration, routine USG examination of fetal profile and maternal physical condition. Timely detection of placenta praevia and abruptio placentae with adequate management by skilled surgeon, safe anaesthesia, blood transfusion can substantially reduce the maternal and fetal mortality, other moribund comorbidities.

**Key words:** Antepartum haemorrhage (APH), Pregnancy, Neonatal death, Perinatal death

Date of Submission: 15-08-2018

Date Of Acceptance: 03-09-2018

### I. Introduction

Though pregnancy and child birth is a physiological process, yet all women during pregnancy are at risk. Antepartum haemorrhage is one of the most ominous complication of pregnancy. APH is defined as bleeding from or into the genital tract after the 28<sup>th</sup> week of pregnancy but before the birth of the baby.<sup>1</sup> The major causes of APH are placenta praevia and abruptio placentae.<sup>2</sup> It is associated with high maternal mortality and morbidity.

About one third cases of antepartum haemorrhage is due to placenta praevia. Placenta praevia is a condition in which the placenta is implanted entirely or in part in lower uterine segment. Any patient who reports a significant amount of painless and apparently causeless bleeding during last trimester of pregnancy must be considered to have placenta praevia unless proved otherwise.<sup>3</sup> The incidence of placenta praevia is increased by multiparity, advancing age and previous caesarean delivery. Incidence is slightly higher in multiple pregnancy.<sup>4</sup>

In Bangladesh, 26% mother die due to obstetric haemorrhage.<sup>5</sup> Abruptio placenta is one form of antepartum haemorrhage where the bleeding occurs due to premature separation of normally situated placenta. Approximately 30% cases of third trimester bleeding are due to placental separation, with the initial haemorrhage usually encountered after the 26<sup>th</sup> week. Exact causes of placental separation are often difficult to ascertain. Predisposing factors are hypertensive states of pregnancy, advanced maternal age, multiparity, uterine distention, cigarette smoking. Precipitating causes are trauma, sudden reduction in uterine volume. Approximately 80% of patients will present with vaginal bleeding and two thirds will have uterine tenderness and abdominal or back pain. One third will have abdominal contractions.<sup>4</sup>

In our country, antepartum haemorrhage is the grave obstetrical emergency, because many of the patients report with alarming per vaginal bleeding without any antenatal visit or diagnosis. General condition of these patients are already so poor that they cannot cope with this serious ailment. Mother and fetus both are in danger because of bleeding. Pregnancies complicated by antepartum haemorrhages have resulted in excessively high rate of preterm delivery, low birth weight, stillbirth, congenital anomalies, respiratory distress syndrome, anaemia and perinatal and neonatal death.<sup>6</sup>

## II. Materials and method

It was a cross sectional study carried out in the Department of Obstetrics & Gynaecology, Dhaka Medical College Hospital, Dhaka from January 2014 to December 2015. Total 100 sample were included in this study. All patients presented with pregnancy having P/V bleeding after 28 weeks and during labour were included. Data were analyzed using statistical package for social science (SPSS) for windows version 20.

## III. Results

**Table-1: Prevalence of antepartum hemorrhage, placenta praevia and abruption placenta**

Parameters	Number of patients	Percentage
Total number of patients admitted	10242	
Antepartum haemorrhage (APH)	442	4.31
Placenta praevia	310	70.13
Abruptio placenta	132	29.86

**Table-2: Distribution of the patients by age (n=100)**

Age in years	Frequency	Percent
<20	11	11.0
21-25	39	39.0
26-30	30	30.0
31-35	19	19.0
>36	1	1.0
Total	100	100.0
Mean±SD	26.73±4.87	
Range	18-40	

**Table -3: Distribution of patients by characteristics of APH**

Characteristics	Number of patients	Percentage
Colour of bleeding		
Bright red	76	76.0
Dark red	20	20.0
Clotted	4	4.0
Total		
Mild	42	42.0
Moderate	42	42.0
Severe	16	16.0
Quantity of bleeding in subsequent episode		
Mild	23	23.0
Moderate	40	40.0
Severe	37	37.0

**Table -4: Distribution of patients by cause of bleeding**

Cause of bleeding	Number of patients	Percentage
Spontaneous	88	88.0
Trauma	1	1.0
Coitus	2	2.0
Fall	7	7.0
Heavy weight lifting	1	1.0
Household works	1	1.0
Total	100	100.0

**Table-5: Distribution of the patients by antenatal check-up**

Antenatal check-up	Frequency	Percentage
Regular	36	36.0
Irregular	42	42.0
None	22	22.0
Total	100	100
Mean +SD		
Range		

**Table-6: Distribution of patients as per hemoglobin on admission (n=100)**

Hemoglobin %	Number of patients	Percentage
<40	7	7.0
40-50	55	55.0
51-60	34	34.0
>60	4	4.0

**Table-7: Distribution of the patients by previous D&C and C/S**

	Frequency	Percent
D&C	9	9.0
Caesarean section	14	14.0

**Table-8: Distribution of cause of APH and mode of delivery**

Mode of delivery	Cause of APH		
	Placanta	Abruptio	Total
	Previa	Placenta	
Caesarean section	65(86.7)	17(68.0)	82(82.0)
Vaginal Delivery	10(13.3)	8(32.0)	18(18.0)
<b>Total</b>	<b>75(100.0)</b>	<b>25(100.0)</b>	<b>100(100.0)</b>

P value=0.035

**Table-9: Distribution of patients by birth status/ Neonatal outcome (n=100)**

Viability	Number of patients	Percentage
Live birth	82	82.0
Still birth	18	18.0
Neonatal death	6	6.0
Perinatal death	29	29.0
Total	100	100.0

**Table10: Distribution of fetal outcome:**

Mode of delivery	Total no of patients	Live birth	Still birth	Neonatal death	Perinatal death
Vaginal delivery	18	13 (72.22%)	5 (27.77%)	2 (11.11%)	7 (38.88%)
Caesarian Section	82	69 (84.14%)	18 (21.95%)	4 (4.87%)	22 (26.82%)

**Table-11: Distribution of patients by maternal outcome (n=100)**

Outcome	Number of patients	Percentage
Healthy	83	83.0
Morbidity	15	15.0
Mortality	2	2.0

**Table-12: Distribution of patients by maternal complication (n=17)**

Complication	Number of patients	Percentage
Shock	4	4.0
PPH	9	9.0
Wound dehiscence	2	2.0
DIC	2	2.0

#### IV. Discussion

Antepartum haemorrhage is one of the deadly complication of pregnancy, which can be diagnosed easily and managed properly by routine antenatal check up and timely step of management. In the beginning of 21<sup>st</sup> century APH is still one of the leading cause of maternal and perinatal mortality in developing countries. Dhaka Medical College Hospital, which is the busiest tertiary hospital in Bangladesh, where this study was conducted. Everyday two or more patient presenting with antepartum haemorrhage admitted in this hospital, among them, most patients did not have any antenatal check up. They even do not know their blood group and have no donor with them. Very few patients had antenatal check up but that is also irregular.

In our country, antepartum haemorrhage is the grave obstetrical emergency because many of the patients report with alarming per vaginal bleeding without any antenatal visit or diagnosis. General conditions of these patients are already so poor that they cannot cope with this serious ailment. Mother and fetus both are in danger because of bleeding. Pregnancies complicated by antepartum haemorrhage have resulted in excessively high rate of preterm delivery, low birth weight, still birth, congenital anomalies, respiratory distress syndrome, anaemia, perinatal and neonatal death.<sup>6</sup>

Advancing maternal age is associated with increased risk of placenta praevia.<sup>4</sup> In this study, 50% of patients were from 26-35 yrs of age and 50% of patients were from <20-25 yrs of age. The risk of placenta praevia and abruptio placentae both were increased dramatically with advancing maternal age, with women older than 40 years of age, having almost nine fold greater risk than women under the age of 20 years.<sup>1</sup> In this point, increased age related to increased risk of placenta praevia is not clearly ruled out in this study, may it be due to majority of obstetric patients included in this study were of <25 yrs of age and only one patient was above 36 yrs of age, 19 patients were from 31-35 yrs of age. In other studies, Fatema had shown maximum percentage of patients (28.0%) were from 26-30 years<sup>7</sup>, Ananth had shown 29.18% were from 30-34 years<sup>8</sup>, Bilkis had shown 36% patients were from 26-30 years of age.<sup>9</sup> But in this study, majority of patients (39%) were from 21 to 25 years of age.

Regarding this study, 82(82%) of patients were delivered by caesarean section and 18(18%) of patients were delivered by vaginal delivery. Among 75(75%) patients with placenta praevia, 65(86.7%) patients required caesarean section and in 25(25%) patients with abruptio placentae 17(68.0%) required caesarean section. In 10 (13.3%) patients with placenta praevia delivered by vaginal delivery and 8(32.0%) patients with abruptio placentae delivered by vaginal delivery. In caesarean section, live birth were 69(84.14%), still birth were 18(21.95%), neo-natal mortality were 4(4.87%) and perinatal mortality were 22(26.82%). In vaginal delivery, live births were 13(72.22%), still births were 5 (27.77%), neo-natal mortality were 2(11.11%) and perinatal mortality were 7(38.88%). So most of the patients with placenta praevia and also abruptio placentae required caesarean section and outcome of delivery is definitely better with caesarean section than that of the vaginal delivery. In both the studies, perinatal loss is more during vaginal delivery than that of the caesarean section.

In one study by Forhad QE 200115, showed that, 264 patients of placenta praevia and 76 patients of accidental haemorrhage were admitted in Gynae and Obs. dept. of DMCH and the incidence of placenta praevia was 2.58% and accidental haemorrhage was 0.74%. So that, the prevalence of antepartum haemorrhage were

3.32%. The prevalence of antepartum haemorrhage is similar with the prevalence APH of this study. Among patients with placenta praevia 95.7% were delivered by caesarean section and among patients with accidental haemorrhage 25% were delivered by C/S. Among patients with placenta praevia and accidental haemorrhage, perinatal loss during vaginal delivery was 75% and 66.7% and during caesarean section was 36.4% and 50% respectively.

In this study, out of 75 APH patients with placenta praevia, 65(86.7%) delivered by caesarean section, and 10(13.3%) delivered by vaginal delivery. In 25 patients with abruptio placentae, 17(68.0%) delivered by caesarean section and 8(32.0%) delivered by vaginal delivery. Previous caesarean section is also associated with increased incidence of placenta praevia<sup>1</sup> in this study out of 100 APH patients, 14(14%) patients had previous caesarean section and 9 (9%) patients had previous H/O dilatation and curettage(D&C) Different studies have shown similar incidence of previous C/S, such as Mohon et al, 18.7%<sup>10</sup>, Fatema 10.2%<sup>7</sup>, Bilkis 11%<sup>9</sup> and Bhoumik 20.12%<sup>11</sup>. Repeated pregnancies cause endometrial scarring at places and conceptus fail to locate the normal site and then implant in the lower uterine segment. There are different studies confirmed that uterine scar could predispose to placenta praevia. All the risk factors contribute the damage of endometrium or myometrium leading to conditions for the abnormal placental implantation.

In this study, there were 51 preterm delivery, 48 term and one post term delivery. And out of 100 patients 83 mothers were healthy, 15 developed different kinds of morbidity and 2 died as a consequence of complication. Among patients with morbidity, 4 patients developed shock, 9 patients had postpartum haemorrhage and 2 patients developed disseminated intravascular coagulation (DIC). And 2 patients died from complication of disseminated intravascular coagulation. Maternal mortality has been reduced significantly with the advancement of safe, skilled surgery, safe anaesthesia, continuous postoperative follow up, good facilities for blood transfusion, but still there is high incidence of maternal mortality. Maternal mortality in developed countries, is not very high. In one study, by Donald had shown maternal mortality was 0.57%.<sup>12</sup> Bilkis had shown maternal mortality was 2%<sup>9</sup> Quiyan had shown 2.04%.<sup>13</sup> These result of this study in our country incidence of maternal mortality in patient with placenta praevia is high than that of developed countries. This may be due to lack of antenatal check up, maternal malnutrition and anaemia, lack of well equipped near hospitals from patient's home and lack of transport facilities and horrible traffic jam in cities. After identifying all these factors Govt. of this country in collaboration with WHO and UNICEF has been launching a program to reduce maternal mortality through EMOC (Emergency Obstetric Care) services, which has extended their activities up to union health center. During this study period, 4 patients presented with shock and 2 patient presented with DIC, 4 patients could be survived by immediate proper management but none of the DIC patients could be survived.

Maternal USG is a noninvasive procedure, less expensive and most effective method of diagnosis of placenta praevia. But abruptio placentae is essentially a clinical diagnosis. Trans-abdominal USG is currently the most commonly used method for diagnosis of placenta praevia. Accurate localization of placenta praevia via the trans-abdominal route is difficult in obese patient and patient with over-distended bladder, posterior placentation. Trans-abdominal USG is not widely available in rural healthcare centers where majority of our poor patients live. In developing countries, most of patients are anaemic due to lack of proper antenatal check up. So undiagnosed patients with placenta praevia and anaemia, when bleeding started it is difficult to survive these patients, even in developed centers with skilled surgeons and efficient anaesthetist with good support system.

## V. Conclusion

As antepartum haemorrhage is not preventable, but maternal outcome and fetal outcome can be improved by regular antenatal check up, monitoring of maternal haemoglobin concentration, routine USG examination of fetal profile and maternal physical condition. Timely detection of placenta praevia and abruptio placentae with adequate management with skilled surgeon, safe anaesthesia, blood transfusion can substantially reduce the maternal mortality and fetal mortality other moribund comorbidities.

## References

- [1]. Dutta DC. Textbook of obstetrics, Central Book Agency 6<sup>th</sup> ed. 2005. 18: 243-261.
- [2]. Neilson JP. Antepartum haemorrhage. In : Dewhurst's textbook of Obstetrics and gynaecology for postgraduates. 6<sup>th</sup> ed. 1999: 135-9.
- [3]. Dutta DC. Caesarean section in placenta praevia in rural obstetric. Indian Med Assoc 1980; 75: 1759.
- [4]. DeCherney All. Current Obstetric & Gynaecologic Diagnosis & Treatment. 10<sup>th</sup> edition, Lange Medical Books/McGraw Hill. Page 328-341.
- [5]. Essential of obstetric care, UNICEF, Dhaka, Bangladesh,2000.
- [6]. Ananth-CV, Smulian JC, Vintzileos AM. The association of placenta praevia with history of caesarean delivery and abortion: a meta analysis. Am J Obstet Gynecol 1997 ;177(5): 1071-78.
- [7]. Fatema A. Study of pregnancy outcome in placenta praevia. Personal study (Dissertation for fellowship part-I!), BCPS, Dhaka, 2006.
- [8]. Ananth CV, et al. Effect of maternal age and parity on the risk of uteroplacental bleeding disorders in pregnancy. Am J Obstet

- Gyizecol 2006; 88: 511-6.
- [9]. Bilkis M. Relationship between the clinical presentation and maternal-fetal outcome in placenta praevia at DMCH. Personal study of 100 cases (Dissertation for fellowship part-II). BCPS, Dhaka, 2009.
- [10]. McMahon JM, Lir, Schenck AP, Olshon AF, Royce RA. Previous Caesarean Birth- A Risk Factor for Placenta Praevia? J Reprod Med 2007; 42: 409-12.20.
- [11]. Bhowmik DK. Risk factors in placenta praevia and the maternal and perinatal outcome. Personal study of 159 cases (Dissertation for fellowship part-I!), BCPS, Dhaka, 2002.
- [12]. Donald I. Antepartum haemorrhage. In: Practical Obstetric Problems. BI publications pvt. Ltd; 5<sup>th</sup> ed. 2008; 423-454.
- [13]. Quaiyum A. A clinical study of placenta praevia admitted at MMCH (Dissertation for fellowship part-II). BCPS, Dhaka, 2002.

Dr. Munirunnessa. " Outcome of Delivery of Patients Presenting With Antepartum Haemorrhage in Dhaka Medical College Hospital." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 8, 2018, pp 58-63.