

# Study of obstetric outcome in antepartum haemorrhage

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## Abstract:

The aim of the present study was to study the demographic profile, type of antepartum haemorrhage, maternal and perinatal complications in cases of antepartum haemorrhage and to formulate preventive guidelines so as to reduce maternal and perinatal complications in cases of antepartum haemorrhage. This retrospective study period extends from 1<sup>st</sup> May 2013 to 30<sup>th</sup> June 2013. Fifty-seven diagnosed cases of antepartum haemorrhage were included in the study. The data was collected on a predesigned proforma and percentage analysis was done. Out of total 57 diagnosed cases of antepartum haemorrhage, multiparity was the major risk factor observed in present study. Placenta previa was the commonest type of antepartum haemorrhage, abruptio placentae being the second major type. In spite of tertiary care, there was 1 maternal death and high perinatal mortality (21.1%). The present study indicates that uncorrected anaemia (71.9%) is still common in India contributing to increased maternal mortality and also necessitating high requirement of blood transfusion (66.7%). Multiparity (61.4%), previous LSCS (21%) were the major etiological factors contributing to antepartum haemorrhage. Based on the observations made during the study, it can be concluded that antepartum haemorrhage is the major cause of maternal morbidity and perinatal mortality.

**Keywords:** Antepartum haemorrhage, Placenta previa, Abruptio Placentae, Maternal mortality.

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## Introduction

Obstetric haemorrhage is the world's leading cause of maternal mortality (1). Antepartum haemorrhage is defined as bleeding from or into the genital tract after 28 weeks of pregnancy and before delivery of the baby (2). It is one of the most frequent emergencies in obstetrics occurring at a prevalence of 0.5-5% (3). Antepartum haemorrhage is a grave obstetrical emergency and is a leading cause of maternal and perinatal mortality and morbidity. It complicates about 2-5% of all the pregnancies. It can be due to placenta previa, abruption placentae, indeterminate cause or local causes of genital tract.

Maternal mortality due to antepartum haemorrhage has significantly decreased in the developed countries due to better obstetrical outcome. In India maternal and perinatal mortality is still very high due to associated problems like anaemia, difficulties in transport in cases of emergency and restricted medical facilities (4). Zeeman's study of obstetric critical care provision identifies haemorrhage as one of the most frequent reasons for admission to intensive care unit (5).

Maternal complications of antepartum haemorrhage are malpresentation, premature labour, postpartum haemorrhage, shock, retained placenta. It also includes higher rates of caesarean sections, peripartum hysterectomies, coagulation failure and death. Foetal complications are premature delivery, low birth weight, intrauterine death, congenital malformations and birth asphyxia (6-10).

In modern obstetrics there is an increase in the caesarean section rates of 30-40%. In a case of previous caesarean section there is an increase in the incidence

of placenta praevia. Morbidly adherent placenta poses a challenge in these cases. Folic acid deficiency is considered as one of the etiological factor for abruptio placentae. In developing countries like India, there is high incidence of untreated pre-eclampsia which is the main etiological factor for development of abruptio placentae. So it is important to analyse various causes of antepartum haemorrhage in present day obstetrics in India (11-13).

Antepartum haemorrhage goes hand in hand with postpartum haemorrhage as there is high incidence of postpartum haemorrhage in cases of antepartum haemorrhage. Untreated anaemia is universally found in our scenario. Blood transfusion facilities are still inadequate in rural India. Late referral, lack of transport facilities and inadequate knowledge of medical and paramedical staff contributes to poor prognosis in cases of antepartum haemorrhage in developing countries like India.

The present study is of importance to understand the aetiology of antepartum haemorrhage and to formulate preventive guidelines to improve the obstetric outcome.

## Materials and Method

**Study Design:** This study is a retrospective analysis.

**Study Setting:** The study was conducted at our tertiary care centre. The data was collected from the case record files obtained from the record section for retrospective analysis.

**Inclusion Criteria:** The diagnosed cases of antepartum haemorrhage were included in the study.

**Methodology:** The data was obtained from the case record files obtained from the record section of the

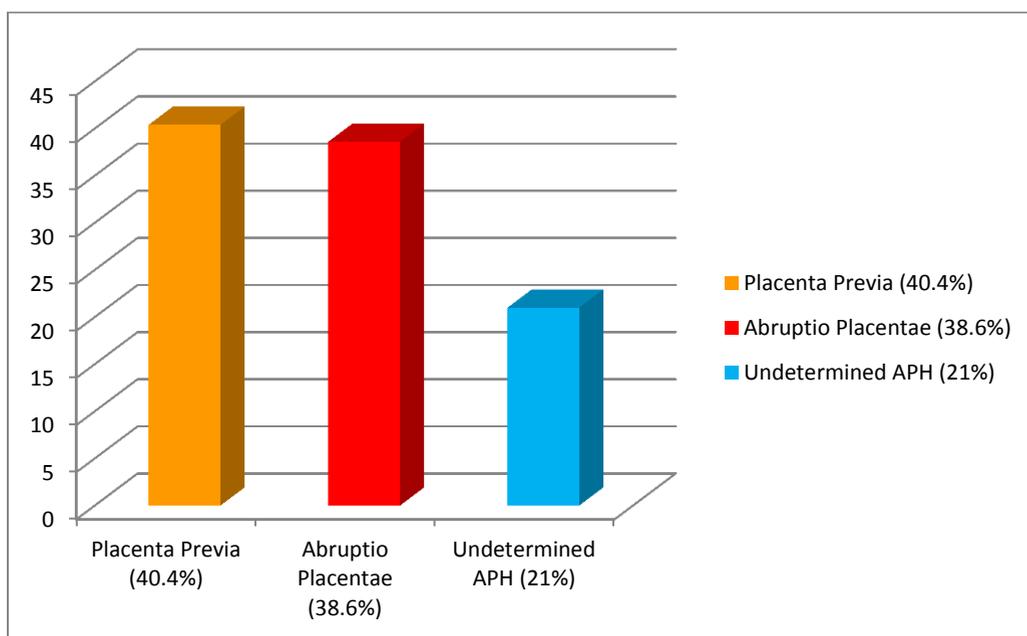
tertiary care centre after getting Institutional Ethics Committee clearance. The data was analysed retrospectively. 57 diagnosed cases of antepartum haemorrhage were included in the study.

Statistical analysis of the data has been done. The data was collected on a predesigned proforma and percentage analysis has been done.

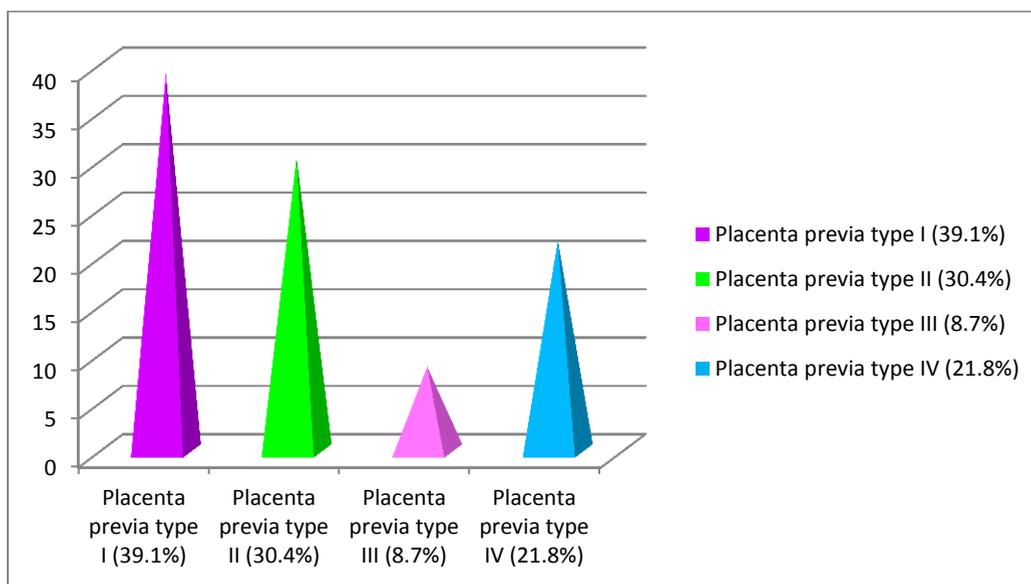
**Results**

The medical records of 57 diagnosed cases of antepartum haemorrhage were studied and it was observed that 56 (98.2%) cases were registered and

only 1 (1.8%) case was not registered. 37 (64.9%) females were from urban areas and 20 (35.1%) of them were from rural areas. Out of the 57 diagnosed cases, 35 (61.4%) cases were multipara and 22 (38.6%) cases were primipara. Of these 57 cases of antepartum haemorrhage, 23 (40.4%) cases were those of placenta praevia, 22 (38.6%) cases were those of abruption and only 12 (21%) cases were those of undetermined APH (Fig.1). Placenta praevia type I was the commonest constituting about 39.1% (09) of cases followed by type II 07 (30.4%), type IV 05 (21.8%) and type III 02 (8.7%) respectively (Fig.2).



**Fig. 1: Types of Antepartum Haemorrhage**



**Fig. 2: Types of Placenta Previa**

Anaemia 41 (71.9%) was found to be the most common maternal disorder followed by previous LSCS 12 (21.1%) and malpresentation 05 (8.8%) respectively (Fig.3). LSCS 41 (71.9%) and blood transfusion 38 (66.7%) were found to be the most common maternal complications (Fig.4). In case of neonates that were delivered, 29 (50.9%) of them were preterm, 20 (35.1%) were full term and 8 (14%) were IUD. 56.1% (32) of the neonates were male and 43.9% (25) of them were female. 68.4% (39) of the babies were low birth weight babies and 50.9% (29) of them were premature (Fig.5).

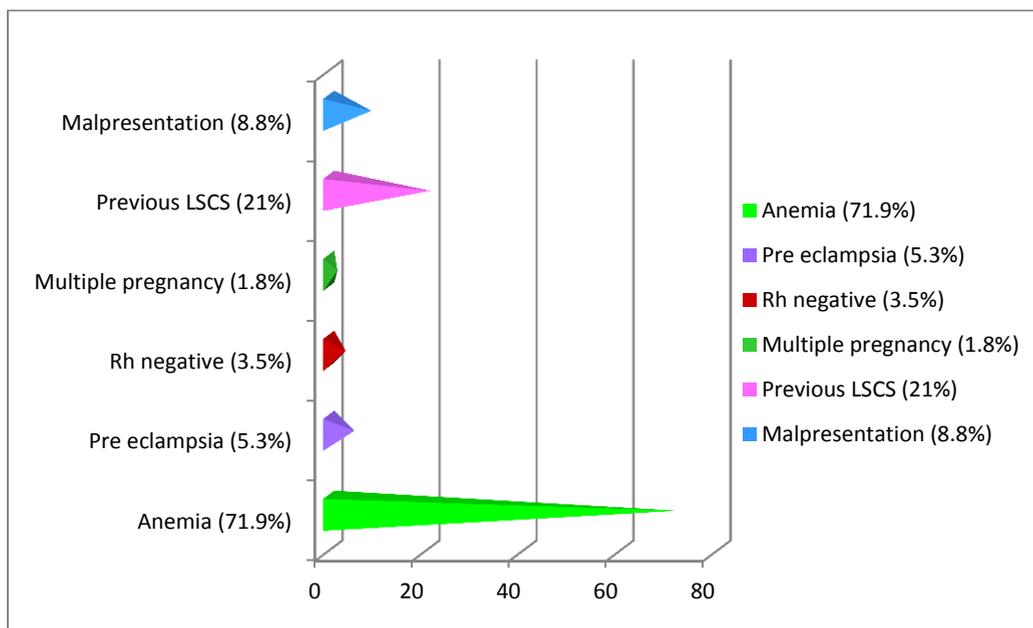


Fig. 3: Maternal Disorders

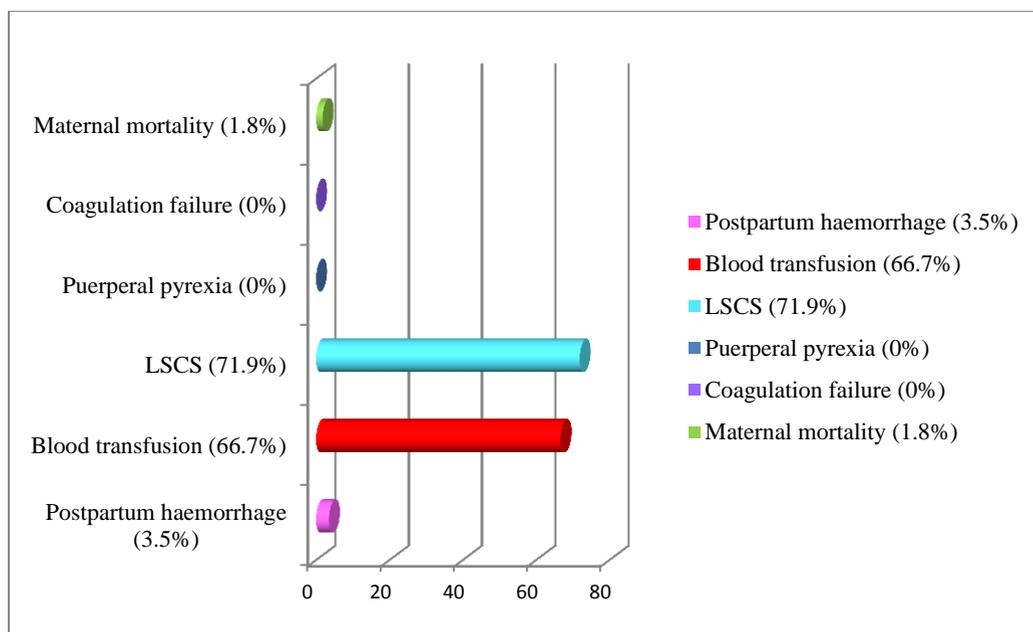


Fig. 4: Maternal Complications

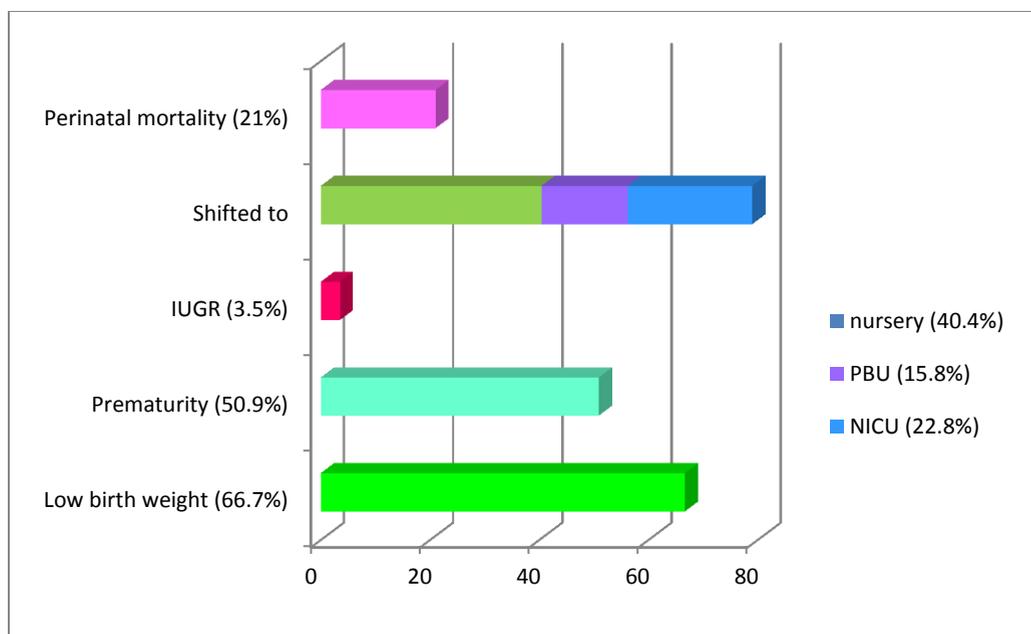


Fig. 5: Perinatal Complications

**Discussion**

The incidence of antepartum haemorrhage in the present study is 0.8% which is significantly less as compared to Sheikh et al (5.4%) and Singhal et al (3.01%) (3-4).

**Table 1: Statistical comparison of types of APH with previous studies**

STUDY	Placenta Praevia	Abruptio Placenta	Undetermined APH
S.R. Singhal et al	52.64%	29.65%	17.7%
Fouzia Sheikh et al	51.7%	44.6%	2.5%
Present Study	40.4%	38.6%	21%

The incidence of placenta praevia is slightly less in the present study (40.4%) as compared to Sheikh et al (51.7%) and Singhal et al (52.64%) (3-4). The incidence of abruptio placentae in the present study (38.6%) is comparable to Sheikh et al (44.6%) but it is higher than Singhal et al (29.65%). The incidence of undetermined APH of present study (21%) and Singhal et al (17.7%) is comparable as compared to Sheikh et al (2.5%) which is significantly less.

**Table 2: Statistical comparison of maternal complications with previous studies**

COMPLICATIONS	S.R. Singhal et al	Fouzia Sheikh et al	Present Study
Postpartum haemorrhage	21.84%	19%	3.5%
Blood Transfusion	78.77%	77.4%	66.7%
LSCS	43.80%	57.1%	71.9%
Coagulation failure	3.8%	-	-
Puerperal pyrexia	10.61%	-	-
Maternal mortality	2.21%	-	1.8%

The above table signifies that in the maternal complication, postpartum haemorrhage (3.5%) is significantly less in the present study as compared to Singhal et al (21.84%) and Sheikh et al (19%). The decreased incidence of postpartum haemorrhage in present study may be due to prophylactic measures taken for prevention of postpartum haemorrhage such as prophylactic use of prostaglandin F<sub>2</sub>Alpha, methyl ergometrine, uterine and ovarian artery ligation. Blood transfusion rate is comparable in all the three studies. Incidence of LSCS is higher in present study as

compared to the other two studies. Maternal mortality rate is comparable in Singhal et al (2.21%) and present study (1.8%).

The incidence of IUGR and Apgar <7 is significantly high in Singhal et al as compared to present study. Perinatal mortality in present study (21.1%) is comparable to Singhal et al (23.70%) however it is significantly high in Sheikh et al (49.66%). The incidence of low birth weight and prematurity is comparable in present study (68.4%) and Singhal et al (83.18%).

## Conclusion

Present study has been carried out at tertiary care centre as a retrospective study named "Study of Obstetric Outcome in Antepartum Haemorrhage". 57 diagnosed cases of antepartum haemorrhage were studied. Demographic profile of the cases indicates that antenatal registration is satisfactory in cases coming to this tertiary care centre. Multiparity was the major risk factor observed in present study. Placenta praevia was the commonest type of antepartum haemorrhage, abruptio placentae being the second major type. In spite of tertiary care, there was 1 maternal death out of 57 cases and high perinatal mortality (21.1%).

The present study indicates that uncorrected anaemia (71.9%) is still common in India contributing to increased maternal mortality and also necessitating high requirement of blood transfusion (66.7%). Multiparity (61.4%), previous LSCS (21%) were the major etiological factors contributing to antepartum haemorrhage. Reducing the family size to 1-2 child norm, reducing the primary LSCS will help in reducing antepartum haemorrhage.

There is a need for directed efforts for correction of anaemia in pregnancy and antepartum haemorrhage. Introduction of availability of injectable iron at rural level can lead to a major reduction in anaemia complicating pregnancy. National Anaemia Prevention Programme needs to be modified by incorporating the facility for injectable iron at rural level.

Based on the observations made during the study, it can be concluded that antepartum haemorrhage is the major cause of maternal morbidity and perinatal mortality. Hence to avoid the complications of antepartum hemorrhage, preventive guidelines include:-

- A female admitted with antepartum haemorrhage must be considered at high risk and timely management must be given by a trained group of doctors.
- Good antenatal and postnatal care is most important and it must be ensured to all the pregnant females to avoid antepartum haemorrhage.
- Improved referral, transport facilities, adequately trained medical and paramedical staff, improved blood transfusion facilities can aid in decreasing the incidence of antepartum haemorrhage.
- Above all is the generation of awareness among all the females regarding antenatal care, postnatal care, various government schemes like Janani Suraksha Yojana, importance of institutional delivery, importance of family planning, importance of iron folic acid supplementation and immunization will be a big step towards decreasing maternal and perinatal morbidity and mortality due to antepartum haemorrhage.
- Considering high perinatal mortality, neonatal care units must be improved.

## References

1. Lolonde A, Davis BA, Acosta A. Postpartum haemorrhage today: ICM/FIGO initiative 2004-2006 UGO; 2006, 94:243-253.
2. Dutta DC. Antepartum haemorrhage. In Konar. HL ed. Textbook of obstetrics. 6<sup>th</sup>Ed. Kolkatta: New central book agency; 2006.p. 243-46.
3. Sheikh F, Khokhar S, Sirichand P, Shaikh R. A study of antepartum haemorrhage: Maternal and perinatal outcome. Medical Channel 2010; 16(2): 268-71.
4. Singhal S, Nymphaea, Nanda S. Maternal and perinatal outcome in antepartum haemorrhage: A study at a tertiary care referral institute. The Internet Journal of Gynaecology and Obstetrics 2008, 9(2): 5580/1b6.
5. Zeeman G. Obstetrical critical care: A blue print for improved outcomes. Crit Care Med 2006; 34: 208-14.
6. Williams Obstetrics. Obstetrical haemorrhage. In Cunningham FG, Leveno KJ, Bloom SL, Hauth JC et al. 22<sup>nd</sup> Edition. McGraw Hill Companies, Inc: 2005: 810-820.
7. Konje JE, Taylor DJ. Bleeding in late pregnancy. In James DK, Steer PJ, Weiner CP, Gonik B, editors. High risk pregnancy management options, 2<sup>nd</sup> ed. London: Harcourt 2000.
8. Neilson JP. Antepartum haemorrhage. In: Edmonds DK editor. Dewhursts textbook of Obstetrics and Gynaecology for post graduates 6<sup>th</sup> ed. Blackwell scientific London. Oxford. 1995:164-74.
9. Neilson JP. Intervention for treating placental abruption (Cochrane review) In: Cochrane Library, Issue 3, 2003. Oxford: Update software (Level I).
10. Khosla A, Dahiya V, Sangwan K, Rathore S. Perinatal outcome in antepartum haemorrhage. J Obstet Gynae India 1989; 71-3.
11. Krohn M, Voigt L, McKnight B, Doling JR, Starzyk P, Benedetti TJ. Correlates of placenta abruption. Br J Obstet Gynecol 1987; 94:333-40.
12. Demissie K, Brekenridge MB, Joseph L. Rhoads GG. Placenta Previa: Preponderance of male sex at birth. Am J Epidemiol 1999; 149: 824-30.
13. Sinha P, Kuruba N. Antepartum haemorrhage: an update. J Obstet Gynaecol. 2008; 28(4): 377-81.