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Dr. M Suguna Shobharani
Associate Professor, Department of OBG, Osmania Medical College, Hyderabad, Andhra Pradesh, India

Corresponding Author:
Dr. M Suguna Shobharani
Associate Professor, Department of OBG, Osmania Medical College, Hyderabad, Andhra Pradesh, India

Assessment of maternal and feto-neonatal outcome among ante partum haemorrhage patients

Dr. M Suguna Shobharani

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Abstract
Introduction: Ante partum haemorrhage is associated with numerous adverse maternal and fetal-neonatal complications. Diagnosis of Ante partum haemorrhage is utmost important to start early and accurate treatment. We aimed at to know the incidence of types of Ante partum haemorrhage and its maternal and fetal outcome.
Materials and Methods: Participants complete history including age, socioeconomic status, address, booked/unbooked, gravida, parity, gestational age calculated from LMP or early first trimester scan was recorded. Maternal and neonatal well being was assessed. Based on clinical condition of patient, management modality was chosen.
Results: Out of 120 patients women with bleeding per vaginum, 64 (53.3%) had Abruptio Placenta, 47 (39.1%) had placenta previa, and remaining 9 (7.5%) patients were categorized under unclassified haemorrhage. Maternal Mortality was 2.5% and Perinatal mortality was 20.6%. Majority of the patients had atonic PPH i.e., 54.1% followed by 13.2% puerperal sepsis, 6.02% had vaginal hysterectomy and 2.4% need for hysterectomy. Prematurity was the commonest complication amongst neonates of Ante partum hemorrhage patients (30.3%) followed by Meconium aspiration syndrome (13.9%).
Conclusion: Improved blood banking services and emergency services at or nearby hospitals, immediate availability of transportation helps us to reduce the maternal and neonatal mortality.

Keywords: Ante partum haemorrhage, maternal outcome, neonatal outcome

1. Introduction
Ante partum haemorrhage is defined as bleeding from or into the genital tract after the period of viability (28th week of pregnancy) until the delivery of the foetus (end of second stage of labour). Ante partum haemorrhage is a most serious complication contributing to significant amount of maternal and perinatal morbidity and mortality. Ante partum haemorrhage can be due to placenta previa, abruption placentae, indeterminate cause or local causes of genital tract. Placenta previa and placenta abruption constitute 50% of Ante partum haemorrhage [1].
The incidence of Ante partum haemorrhage varies from 5.9 to 6.5 per 1000 singleton births and 12.2 per 1000 twin births. In subsequent pregnancy, the risk of abruption is increased as much as 10 fold [2]. In India, maternal mortality is still very high and is 4.08/1000 live births. Perinatal mortality is less than 10 per 1000 total births in developed countries while it is much higher in India 60/1000 total births [3].
Ante partum haemorrhage is associated with numerous adverse maternal and fetal-neonatal complications. The maternal complications in patients with Ante partum haemorrhage are malpresentation, premature labor, postpartum haemorrhage, sepsis, shock and retained placenta. Fetal complications are prematurity, low birth weight, intrauterine death, birth asphyxia and congenital malformations [4].
Diagnosis of Ante partum haemorrhage is utmost important to start early and accurate treatment. Evaluation of Ante partum haemorrhage consists of complete history, examination and ultrasound scan. Speculum examination helps to diagnose, can do once the mother is stabilized. Blood loss can be estimated by maternal shock and fetal compromise.
We aimed at to know the incidence of types of Ante partum haemorrhage and its maternal and fetal outcome.

2. Materials and Methods
This is a prospective observational study conducted on 120 patients presenting with bleeding per

vaginum in third trimester of pregnancy from January 2018 to September 2019 in the department of OBG at Osmania Medical College, Hyderabad, Andhra Pradesh.

2.1 Inclusion criteria
Patients with Bleeding per vaginum after 28 weeks of gestation till the end of second stage of labour Patients of all age groups

2.2 Exclusion criteria
Patients not willing to participate in this study Bleeding from a source in the body, other than gravid uterus.

Participants complete history including age, socioeconomic status, address, booked/unbooked, gravida, parity, gestational age calculated from LMP or early first trimester scan was recorded. Blood loss and pain were assessed. Relevant past history, personal and obstetric history findings were noted.

After taking history, general examination, systemic examination and per vaginal assessment was done. Patients were advised to undergo complete hematological examinations including CBP, viral markers testing, RBS, blood grouping, coagulation profile, RFT, LFT, complete urine examination and required radiological investigations such as USG, CT. Fetal well-being was assessed by modified biophysical profile (NST, AFI) and Doppler velocimetry when it is needed.

Based on clinical condition of patient, management modality was chosen. 1. If bleeding is continuous, cause life threatening for mother or fetus – Immediate LSCS. 2. If patient is stable and fetus ≥ 37 weeks, then it is usually safe to deliver the baby. Vaginal delivery or LSCS was preferred based on maternal and fetal health status.

Post-delivery health monitoring of mother and fetus was taken care and treated accordingly. All the findings were recorded in pre designed proforma and later entered in Microsoft excel sheet. Results were analyzed and findings were expressed as numbers, percentages.

3. Results
The mean age of the patient was 25.48±1.82. Majority of the patients of Ante partum haemorrhage were in the age group of 20-24 years i.e., 62 out of 120 (51.6%). 50 (41.6%) out of 120 patients were in the age group of 25-29 years, 6 (5%) and 2 (1.6%) patients out of 120 were in the age group of 30-34 years and >35 years respectively.

Out of 120 patients women with bleeding per vaginum, 64 (53.3%) had Abruptio Placenta, 47 (39.1%) had placenta previa, and remaining 9 (7.5%) patients were categorized under unclassified haemorrhage (Fig 1).

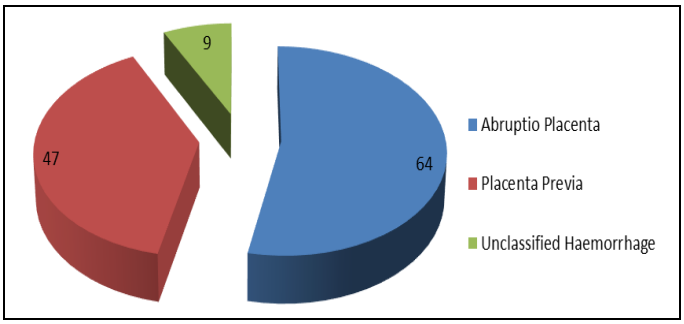

Fig 1: Prevalence various types of Ante partum haemorrhage

70% (84/120) of Ante partum haemorrhage patients were booked cases as compared to 30% (36/120) that were unbooked. Maximum number of Ante partum haemorrhage patients were multiparous i.e., 89 out of 120 (74.1%) whereas nulliparous were 25.8% (31 out of 120).

51.6% of Ante partum haemorrhage patients were in 37-40 weeks of gestational age at the time of admission. The mean gestational age in Ante partum haemorrhage patients was 34.2±2.4 weeks, 36.1±1.8 weeks in placenta previa group and 36.2±1.5 weeks in unclassified haemorrhage group (Table 1).

Table 1: Type of Ante partum haemorrhage in relation to gestational age

Gestational age in weeks	Abruptio Placenta		Placenta previa		Unclassified Haemorrhage		Total	%
28	7	5.8	5	4.1	0	0	12	10
29-32	12	10	8	6.6	0	0	20	16.6
33-36	13	10.8	10	8.3	3	2.5	26	21.6
37-40	32	26.6	24	20	6	5	62	51.6
Total	64	53.3	47	39.1	9	7.5	120	100

Most of ante partum haemorrhage patients delivered by LSCS (56.6%) as compared to vaginal delivery (43.3%) (Fig 2).

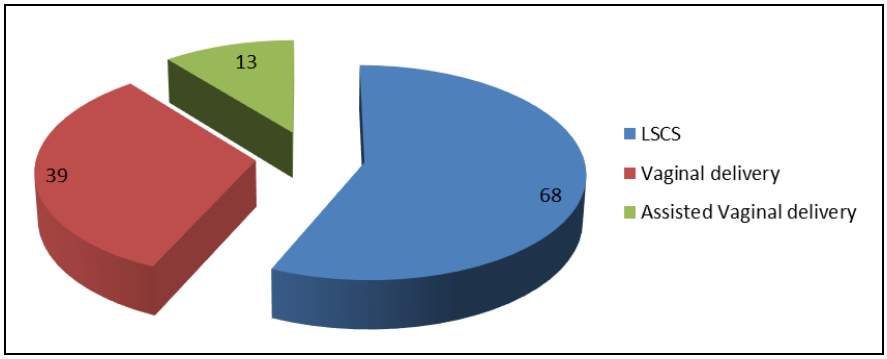

Fig 2: Prevalence of Mode of delivery among ante partum haemorrhage patients

On assessing maternal outcomes among Ante partum haemorrhage patients, 85 (69.1%) out of 120 patients had varied morbidities. 3 patients diagnosed with placenta previa were expired due to hemorrhagic shock. Majority of the patients had atonic PPH (54.1%) followed by puerperal sepsis (13.2%). 65.6% of Ante partum haemorrhage patients, 78.7% of placenta previa patients and 44.4% of unclassified hemorrhage patients had morbidities (Table 2). On statistical correlation of maternal morbidities of all 3 causes of APH shown insignificant (Chi square value = 2.71; p value = 0.25).

Table 2: Prevalence of Maternal mortality and morbidities

	Abruptio placenta	Placenta previa	Unclassified haemorrhage	Total	Percentage
Mortality	0	3	0	3	3.6%
Morbidity					
Atonic PPH*	28	16	2	46	54.1%
Haemorrhagic shock	0	3	0	3	3.6%
Coagulation failure	1	2	0	3	3.6%
Puerperal sepsis	2	8	1	11	13.2%
Renal failure	4	0	0	4	4.8%
Scar dehiscence	2	3	1	6	7.2%
Need for hysterectomy	0	2	0	2	2.4%
Vaginal hysterectomy	5	0	0	5	6.02%
Total	42	37	4	83	100%
Percentage	50.6	44.5	4.8	100%	

*PPH - Post Partum Hemorrhage

On assessing neonatal outcomes among babies delivered in this study, 79 out of 126 babies (62.6%) varied morbidities. 8 neonates expired due to PREM, HMD, RDS and NS and 18 were stillbirths. Majority of the neonates had premature rupture of membranes (30.3%) (Table 3). On statistical correlation of maternal morbidities of all 3 causes of APH shown significant (Chi square value = 10.48; p value = 0.005).

Table 3: Prevalence of Feto-Neonatal mortality and morbidities

	Abruptio placenta	Placenta previa	Unclassified haemorrhage	Total	Percentage
Mortality	15	11	0	26	32.9%
Morbidity					
Birth Asphyxia	6	2	1	9	11.3%
MAS	6	5	0	11	13.9%
NJ+NS	3	5	1	9	11.3%
PREM	10	12	2	24	30.3%
PREM+HMD	2	4	0	6	7.5%
PREM+HMD+NS	1	2	0	3	3.7%
PREM+NJ	1	2	0	3	3.7%
PREM+NS	1	2	0	3	3.7%
PREM+RDS	2	1	0	3	3.7%
Total	35	40	4	79	100%
Percentage	44.3%	50.6%	5.06%	100	

*MAS - Meconium aspiration syndrome, BA - birth asphyxia, NJ - Neonatal jaundice, NS - neonatal septicemia, PREM – Prematurity, HMD - Hyaline membrane disease, RDS - Respiratory distress syndrome

4. Discussion

Ante partum haemorrhage (APH) is an obstetric emergency condition. Most of the women in middle and low developing countries are anemic. Anemia is associated with increased risk of Ante partum haemorrhage and Post partum haemorrhage. In India, other than anemia, factors responsible for high morbidity rate among postpartum haemorrhage women are delay in transport, lack of fully equipped medical facilities nearby, unavailability of resources at hospitals in case of emergencies. These factors are still major concern in developing countries.

Incidence of various causes of ante partum haemorrhage of various studies was tabulated in Table 4. Our study has shown similar prevalence of ante partum haemorrhage as Laxmi Rachkonda *et al.* [5] and Nega Chufamo *et al.* [6].

Table 4: Incidence of various causes of APH by different studies

Study	Distribution of APH according to cause			
	Year of the Study	Abruptio Placenta	Placenta Previa	Unclassified Haemorrhage
Priyanka Tyagi *et al.* [7]	2016	19	80	1
Laxmi Rachkonda *et al.* [5]	2014	58	42	0
Nega Chufamo *et al.* [6]	2014	65.1	26.7	8.2
Archana Maurya *et al.* [8]	2013	27	71	2
Chakraborthy *et al.* [9]	1993	31.25	45.8	22.9
Kshama Kedar *et al.* [10]	2016	51.91	45.08	2.29
Sunil Kumar S *et al.* [11]	2017	42.2	49.5	6.8
Present Study	2018	53.3	39.1	7.5

50 (41.6%) out of 120 patients were in the age group of 25-29 years, 6 (5%) and 2 (1.6%) patients out of 120 were in the age group of 30-34 years and >35 years respectively. Ananth *et al* observed placenta previa incidence increases with advancing age [12].

In our study, 70% (84/120) of Ante partum haemorrhage patients were booked cases as compared to 30% (36/120) that were unbooked. In contrast to this study Rai *et al.* [13] noted more number of unbooked cases in their study, this may be because this studies done in 1989. In recent years, government

authorities, NGO's have initiated many programmes for maternal and child health care which have changed health status of pregnancy cases drastically. These unbooked cases belonged to lower socioeconomic status.

Maximum number of Ante partum haemorrhage patients were multiparous i.e., 89 out of 120 (74.1%) whereas nulliparous were 25.8% (31 out of 120). Chakraborthy *et al.* [9] reported among multigravidae patients there is an increase in prevalence in Abruptio placentae.

51.6% of Ante partum haemorrhage patients were in 37-40 weeks of gestational age at the time of admission. The mean gestational age in Ante partum haemorrhage patients was 34.2±2.4 weeks, 36.1±1.8 weeks in placenta previa group and 36.2±1.5 weeks in unclassified haemorrhage group.

Most of ante partum haemorrhage patients delivered by LSCS (56.6%) as compared to vaginal delivery (43.3%) as per this study. Chakraborthy *et al.* [9] found that 52.1% cases had LSCS and 47.9% had vaginal delivery. Idris Usman Takai *et al.* [14] noted 53.5% patients had LSCS. Sheikh F *et al.* [15] did a study at Hyderabad, noted 57.1% LSCS rate.

In this study, Maternal Mortality was 2.5% and Perinatal mortality was 20.6%. Majority of the patients had 54.1% atonic PPH followed by 13.2% puerperal sepsis, 7.2% patients had scar dehiscence, 6.02% had vaginal hysterectomy, 4.8% renal failure cases, 3.6% had hemorrhagic shock, 3.6% coagulation failure and 2.4% need for hysterectomy. Prematurity was the commonest complication amongst neonates of Ante partum hemorrhage patients (30.3%) followed by Meconium aspiration syndrome (13.9%), birth asphyxia (11.3%), Neonatal jaundice and neonatal septicemia (11.3%), prematurity and hyaline membrane disease (7.5%), 3.7% of neonates had prematurity, hyaline membrane disease, neonatal septicemia, prematurity and neonatal jaundice, prematurity and neonatal septicemia, prematurity and respiratory distress syndrome combinations each.

Idris Usman Takai *et al.* [14] found the maternal mortality rate as 2% and perinatal mortality as 41.07%. 24.2% patients had post partum haemorrhage, 61.5% had anemia necessitating blood transfusion.

Laxmi Rachkonda *et al.* [5] noted maternal morbidities as 52% anemia, 30% oligohydramnios 18% mal presentation, 28% hypertensive disorder, 16% PPH, 6% HELLP syndrome, 6% DIC, 4% Shock and neonatal complications were 53% low birth weight, 46% admitted in NICU, 16% birth asphyxia and 13% IUGR.

Singhal *et al.* [16] observed 100% anemia, 27.8% postpartum haemorrhage (PPH), 78.7% need of blood transfusions, 10.01% puerperal pyrexia, 10.6% coagulation failure, 83.1% low birth weight and 12.5% birth asphyxia.

Nega Chufamo *et al.* [6] reported higher neonatal mortality of 36.8%. Archana Maurya *et al.* [8] found maternal mortality rate was 4% and perinatal mortality was 12.69%. Singhal *et al.* [16] reported the maternal and perinatal mortality rate was 2.21% and 23.7% respectively.

Bhandari S *et al.* [17] did a study on antepartum haemorrhage of unknown origin found 12.3% PPH, 0.8% premature rupture of membranes, 14.1% preterm delivery, 12.5% low birth weight and 1.3% stillbirths.

Kshama Kedar *et al.* [10] stated 52.94% had PIH as a cause for abruption. Anemia was most common complication in APH followed by PPH. One patient died of renal failure in AP. Neonatal jaundice was the most common complication amongst the neonate followed by prematurity.

Sunil Kumar S *et al.* [11] reported 42.2% PPH and 66.5% neonatal complications. Wasnik SK *et al.* [18] stated that 73% patients of APH had Pregnancy induced hypertension / Preeclampsia. 90% of patients underwent LSCS. Maternal and neonatal morbidities were post partum hemorrhage (36%), need of blood transfusion (75%), preterm deliveries (65%), low birth weight (40%) and NICU admission (44%). Though there is no maternal mortality due to timely intervention but 3% patients underwent Obstetric Hysterectomy and 6.4% required CCU admission. Perinatal mortality was 21%.

5. Conclusion

Ante partum haemorrhage is a grave obstetric complication can be prevented by regular antenatal checkup, early detection of high risk cases and their accurate management. Maternal and fetal mortality can be reduced by multidisciplinary approach. Improved blood banking services and emergency services at or nearby hospitals, immediate availability of transportation helps us to reduce the maternal and neonatal mortality.

6. References

1. www.fogsi.org/wp-content/uploads/fogsi-focus/antepartum-haemorrhage.pdf.
2. Bhinde A, Thilaganathan B. Recent advances in the management of Placenta Previa. Curr Opin Obstet Gynecol. 2004; 16:447-51.
3. Harrison KA. Maternal mortality. Brt J Obstet Gynecol. 1985; 5(suppl):100-115.
4. Silver RM. Abnormal Placentation: Placenta previa, Vasa previa and Placenta accrete. Obstet Gynecol. 2015.
5. Laxmi Rachkonda, Suresh Rawte, Surabhiruwale. The Clinical study of ante partum haemorrhage. International Journal of Recent Trends in Science and Technology. 2014; 12(3):581-588.
6. Nega chufamo, Hailemariam segni, Yibeltal Kiflie Alemayehu. Incidence, Contributing factors and outcome of ante partum haemorrhage in Jimma University Specialized Hospital Southwest Ethiopia. Universal Journal of Public Health. 2015; 3(4):153-159.
7. Priyanka Tyagi, Nidhi Yadav, Parul Sinha, Uma Gupta. Study of ante partum haemorrhage and it's maternal and perinatal outcome. 2016; 5(11).
8. Archana Maurya, Sonal Arya. Study of ante partum haemorrhage and its maternal and perinatal outcome. International Journal of Scientific and Research publications, 2014, 4.
9. Kshama Kedar, Prashant Uikey, Ashwini Pawar, Anuja Choudhary. Maternal and fetal outcome in antepartum haemorrhage: a study at tertiary care hospital. 2016; 5(5).
10. Sunil Kumar S, Reddi Rani P, Setu Rathod, Seetesh Ghose. Maternal and perinatal outcomes in cases of antepartum haemorrhage: a 3-year observational study in a tertiary care hospital. 2017, 6.
11. Ananth CV, Wilcox AJ, Savitz DA, Bowes WA Jr, Luther ER. Effect of maternal age and parity on the risk of uteroplacental bleeding disorders in pregnancy. Obstet Gynecol. 1996; 88(4 Pt 1):511-6.
12. Rai L, Duvvi, Rao U, Vaidehi R. Severe abruption placentae – still unpreventable. Int. J.G Gynecol Obstet. 1989; 29:117.
13. Idris Usman Takai, Badia Maje Sayyadi, Hadiza Shehu Galadanci. Ante partum hemorrhage: A retrospective analysis from a northern Nigerian hospital teaching. 2017; 7(2):112-116.
14. Sheikh F, Khokhar S. A study of antepartum haemorrhage:

Maternal and perinatal outcomes. Med Chan. 2010; 16:22.
15. Singhal S, Nymphae, Nanda S. Maternal and Perinatal outcome in ante partum hemorrhage. A Study at a tertiary care referral institute. The Internate Journal of Gynaecology & Obstetrics. 2007; 9(2).
16. Bhandari S, Raja EA, Shetty A, Bhattacharyaa S. Maternal and Perinatal consequences of antepartum haemorrhage of unknown origin.
17. Wasnik SK, Naiknaware SV. Antepartum haemorrhage: causes & its effects on mother and child: an evaluation. Obstet Gynecol Int J. 2015; 3(1):255-258.