

# Maternal And Perinatal Outcome In Antepartum Hemorrhage: A Study At A Tertiary Care Referral Institute

S Singhal, Nymphaea, S Nanda

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## Abstract

**Introduction:** Antepartum hemorrhage (APH) is a grave obstetrical emergency. Maternal and perinatal complications in APH are anemia, malpresentations, postpartum hemorrhage, shock, low birth weight, intrauterine death, and birth asphyxia.

**Aims And Objectives:** Aims of the present study were to find the demographic profile, type of APH, maternal and perinatal complications.

**Patients And Methods:** It is a retrospective study carried out over a period of one year on 226 women admitted with the diagnosis of APH.

**Results:** The incidence of APH was 3.01%. Maternal and perinatal morbidity was very high with increased rates of anemia (100%), cesarean section rate (43.80%), post partum hemorrhage (27.84%), need of blood transfusion (78.77%), puerperal pyrexia (10.61%), coagulation failure (10.61%), low birth weight (83.18%) and birth asphyxia (12.5%). The maternal and perinatal mortality was very high 2.21% and 23.70% respectively.

**Conclusions:** There is very high maternal and perinatal morbidity and mortality in APH.

## INTRODUCTION

Antepartum hemorrhage (APH) is a grave obstetrical emergency and is a leading cause of maternal and perinatal mortality and morbidity. APH is defined as hemorrhage from the genital tract after 20 weeks of gestation but before the delivery of the baby. It complicates about 2-5% of all the pregnancies<sup>1</sup>. APH can be due to placenta praevia, abruption placentae, indeterminate cause or local causes of genital tract. Placenta previa refers to the condition when the placenta is situated wholly or partially in the lower uterine segment and accounts for one third of all cases of APH<sup>2</sup>. It is further classified as type I – if implantation is in lower segment but does not reach the internal os, Type II- placenta reaches the internal os but does not cover it, Type III- placenta covers the internal os but not at full dilatation, Type IV- placenta covers internal os even at full dilatation of cervix<sup>3</sup>. An Abruptio placenta is the condition whenever bleeding occurs due to premature separation of normally situated placenta<sup>4</sup>. Various extra placental causes are cervical polyp, carcinoma cervix, varicose veins, local trauma, condylomata, cervical erosion etc. The maternal

complications in patients with APH are malpresentation, premature labor, postpartum hemorrhage, sepsis, shock and retained placenta. Various fetal complications are premature baby, low birth weight, intrauterine death, congenital malformation and birth asphyxia<sup>2</sup>.

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

## AIMS AND OBJECTIVES

Aims of the study were to find the demographic profile, type of APH, maternal and perinatal complications and mortality.

## PATIENTS AND METHODS

It is a retrospective study carried out over a period of one year on all the patients who were admitted with the diagnosis

of APH. There were a total of 7510 deliveries during this period and 226 women had APH. Age, parity, booking status, education, occupation and residence of the patients were noted down. Details of the babies like weight, sex maturity, whether live or dead were recorded. Records about mode of delivery, maternal complications like pre-eclampsia, malpresentation, anemia, post partum hemorrhage, need of blood transfusion, puerperal sepsis etc. were analyzed.

**RESULTS**

Results are shown in Table I-V. There were total of 7510 deliveries during one year and 226 women had APH. So, incidence of APH was 3.01%. Out of 226 deliveries, 6 women had twin deliveries thus total number of babies delivered were 232. The women were in age group of 18-38 yrs, maximum number 125(55.30%) were in age group of 21-25 yrs. Mean age was 26.8±3.2 yrs. Malpresentations were present in 29(12.91%) women. Out of 29 women, 21, six and two had breech, transverse and oblique lie respectively. All the women were anemic (Hb<11gm%) 9.73% had hemoglobin level less than 5gm%. More than half of the women (52.64%) had placenta previa and about one third (29.65%) had abruptio placentae. Cesarean section rate was very high (43.80%). Fifty-four babies were transferred to nursery and out of these 13 died, 30 were discharged and 11 babies left the hospital against medical advice. One hundred and seventy eight (78.77%) women needed blood transfusion. The need of blood transfusion was one unit, two units, three units, and more than three units in 36, 64, 35 and 43 women respectively. Three women had hysterectomy due to postpartum hemorrhage. Five women who died, four had abruptio placentae complicated by disseminated intravascular coagulation and one had placenta previa who came to hospital very late in labor in the state of irreversible shock.

**Figure 1**

Table 1: Demographic Profile Of Women

Parameter	No. Of Women	Percentage
Booking Status	Registered	79 34.96
	Unregistered	147 65.04
Residence	Rural	139 61.60
	Urban	87 38.40
Parity	Primigravida	61 26.99
	Multigravida	165 63.1
Occupation	Housewife	167 73.89
	Laborer	36 15.93
	Service	23 10.17
Education	Illiterate	67 29.65
	Matric	118 52.21
	Higher	41 28.14

**Figure 2**

Table 2: Associated Obstetrical Conditions

Disorder	No. Of Women	Percentage
Anemia	226	100
Pre-Eclampsia	51	22.57
Rh Negative	6	2.55
Multiple Pregnancy	6	2.55
IUGR	28	12.39
Prev. LSCS	36	15.93
Malpresentation	29	12.91
Prematurity	93	41.85

**Figure 3**

Table 3: Type Of APH

Type Of APH	Number	Percentage
Placenta Previa	Type I	27 11.95
	Type II	24 10.61
	Type III	20 8.85
	Type IV	48 21.23
	Total	119 52.64
Abruptio Placentae	67	29.65
Indeterminate	40	17.7

**Figure 4**

Table 4: Details Of Babies

Parameter	No. Of Women	Percentage
Maturity	<34wks	56 24.14
	34-37wks	43 18.53
	>37wks	133 57.33
Weight Of Babies	<1.5kg	66 28.34
	1.5-2.5kg	127 54.74
	>2.5kg	39 16.71
Apgar < 7 At 5min		29 12.50
Perinatal Mortality	Still Birth	42 18.10
	Died In Nursery	13 5.60
Sex	Male	141 60.78
	Female	89 38.86
	Intersex	2 0.36

**Figure 5**

Table 5: Maternal And Perinatal Complications

Maternal Complications	Number (%Age)	Perinatal Complications	Number (%Age)
Post Partum Hemorrhage	48(21.84)	Low Birth Weight	193(83.18)
Blood Transfusion	178(78.77)	Prematurity	94(41.85)
LSCS	97(43.80)	Apgar	29(12.50)
Coagulation Failure	7(3.80)	IUGR	28(12.39)
Puerperal Pyrexia	24(10.61)	Shifted To Nursery	54(23.27)
Maternal Mortality	5(2.21)	Perinatal Mortality	55(23.70)

**DISCUSSION**

There were 226 women with APH and incidence was 3.01%, which is almost same as that of Arora et al who reported 2.53% incidence of APH, Mean age was 26.8±3.2 yrs, which is the same as the study of Das et al. Incidence of APH was more in multipara (63.01%) than primigravida (26.99%) (Table-I). Other studies have also reported high

incidence of APH in multipara, which was about 5-8 times higher than primigravida<sup>7,8,9</sup>. In present study multipara were two and half time than primigravida. 41.85% women had preterm delivery (Table II) while Silver et al and Cotton et al observed very high association of prematurity with APH of range of 71% and 77.5% respectively<sup>10,11</sup>. Incidence of blood transfusion was very high in present study (78.77%) while Brenner et al and Willikan et al reported 36% and 52.4% incidence of blood transfusion respectively<sup>12,13</sup>. Very high rates of blood transfusion in the present study might be due to the reason that all the patients were already anemic at the time of admission. 21.84% had post partum hemorrhage, almost similar to study by Crane et al<sup>14</sup>. Maternal mortality in present study was 2.21% (5 deaths), which is consistent with the study of Motwani et al.<sup>15</sup> 193 (83.18%) babies were low birth weight, while Arora et al and Khosla et al reported 77% and 66% low birth weight respectively<sup>5,16</sup>. There was male predominance in the present study, 60-78% males and 38.56% females (Table- IV). Similar male predominance in APH is observed by other authors<sup>17,18</sup>. Perinatal mortality was (23.70%) (Table-V) while other authors like Arora et al & Khosla et al reported very high perinatal mortality 61.5% and 53.5% respectively<sup>5,16</sup>. This difference may be due to better neonatal intensive care facility in the present institute. There was very high maternal morbidity with increased rates of anemia, postpartum hemorrhage, blood transfusion, cesarean section rate, puerperal pyrexia and coagulation failure. Similarly perinatal morbidity was high in form of high association of low birth weight babies (83.18%), birth asphyxia (12.50%) and intrauterine growth retardation (12.39%). It is concluded that APH has very high perinatal and maternal mortality and morbidity.

## CORRESPONDENCE TO

Dr. Savita Rani Singhal 14/8FM, Medical Enclave  
Rohtak-124001 Haryana, India 0091-1262-213643 E-mail:  
savita06@gmail.com

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**Author Information**

**Savita Rani Singhal, MD**

Professor, Department of Obstetrics & Gynaecology, Pt. B.D. Sharma Postgraduate Institute

**Nymphaea, MD**

Assistant Professor, Department of Obstetrics & Gynaecology, Pt. B.D. Sharma Postgraduate Institute

**Smiti Nanda, MD**

Senior Professor, Department of Obstetrics & Gynaecology, Pt. B.D. Sharma Postgraduate Institute