

**Research Article****A cross sectional study on causes and different management options in cases of primary postpartum hemorrhage****Iqra Jamil, Hafiz Mubashir Farooqui  
and Muhammad Bilal**<sup>1</sup>Woman Medical Officer, THQ Hospital Ahmedpur East<sup>2</sup>Medical Officer, THQ Hospital Ahmedpur East<sup>3</sup>Medical Officer, BHU DeraNawab Sahib**ABSTRACT****Objective:** To study the causes and different management options in cases of primary postpartum hemorrhage**Patients and Methods:** This cross sectional study was conducted at Department of Obstetrics and Gynecology, THQ Hospital, Ahmedpur East from June 2017 to December 2017. Total 120 cases of primary PPH were selected and causes and different management options were studied.**Results:** Minimum age of the patients of primary PPH was 20 years and maximum age was 40 years with mean age 32.43±6.23 years. In age group 20-25 years there were 36 (30%) patients, in age group 26-30 years 26 (21.67%) patients, age group 31-35 years 19 (15.83%) patients and in age group 36-40 years 39 (32.5%) patients. Primiparous were 36 (30%) followed by Multiparous 81 (67.5%) and Grand multiparous were 3 (2.5%). Uterine atony was the commonest cause of primary PPH that was observed in 78(65%) patients. Hysterectomy was done in 50 (41.6%) patients.**Conclusion:** Maximum patients found in age group 36-40 years and most of the patients were multiparous. Uterine atony was the most common cause of primary PPH. Hysterectomy was performed in most of the cases.**Key words:** Maternal mortality, Hemorrhage Primary postpartum, Uterine atony**INTRODUCTION**

Postpartum hemorrhage is a global issue and is important cause of maternal mortality and morbidity worldwide. WHO defines PPH “as blood loss, exceeding 500 ml from genital tract, after delivery of baby”.<sup>1</sup> According to American College of Obstetric & Gynecology (ACOG) “a hematocrit (Hct) fall of 10% or a hemorrhage that requires blood transfusion.”<sup>2,3</sup> It is leading cause of death in Pakistan and over 25,000 women die to PPH each year.<sup>3</sup> Postpartum haemorrhage is of two types, primary PPH occurs within the 24 hrs of delivery while secondary PPH occurs after 24 hours upto 6 weeks after delivery.<sup>4</sup>

Uterine atony is the commonest cause (>90%) and occurs due to failure of contraction or retraction of myometrium to occlude sinuses embedded in it.<sup>5</sup> Retained placental tissue or membrane may prevent good placental site retraction, so is another cause of PPH.<sup>6</sup> Beside these two, genital tract lacerations and coagulopathy are also causal factors of PPH.<sup>7</sup> Certain risk factors are also known to be associated with each cause specific cause, like over distension of uterus in case of multiple gestation, polyhydramnios, macrosomia. Similarly exhausted uterus in case of

augmentation or induction of labour and infection may be associated with uterine atony. Uterine anomalies, scarring of uterine wall or abnormally adherent placenta may lead to retained product of conception. Similarly for genital tract lacerations, instrumental delivery and macrosoma may be the associated factors. For coagulopathy abruption placenta is a known association.<sup>2-4</sup>

It is important to identify the cause of PPH to manage the condition appropriate and to prevent fatal consequences of PPH. Along with mortalities prevention of morbidities is equally important.<sup>7</sup> Management of PPH comprises of general measures for any cause and specific management for particular cause including medical treatment or surgical intervention.<sup>8</sup> Complications of PPH include hypovolumic shock, which in turn leads to acute renal failure (ARF), adult respiratory distress syndrome (ARDS) and Sheehan's syndrome.

Blood transfusion related complications like transfusion reaction or transmission of certain viral disease. Disseminated intravascular coagulopathy (DIC) is also a common complication.<sup>8,9</sup> Maternal morbidity and mortality rises with delay in diagnosis and intervention, thus the cornerstone of effective management is rapid diagnosis and intervention.<sup>10</sup>

## MATERIAL AND METHODS

This was a cross sectional study conducted at Department of Obstetrics and Gynaecology, THQ Hospital, Ahmedpur East from June 2017 to December 2017. Total 120 patients having age 20-40 years, who developed PPH within 24 hours of deliver were selected for this study.

Cases of intra-uterine fetal death (IUFD) or chronic medical illness were excluded from the study. Study was approved by ethical review committee and written informed consent was taken from all the patients. Base line investigations of all the patients were done. Causes of primary PPH were evaluating by

examining the patient. All the causes like atonic uterus, retained placental tissue or membrane, genital tract laceration (extended episiotomy, perineal, vaginal, cervical or uterine tear) and coagulopathy were recorded on predesigned proforma.

Standard medical management was given to all the patients. Surgical management was given if medical management failed.

All the collected data was entered in SPSS version 18. Mean and SD was calculated for numerical variables and categorical data was presented as frequencies as percentages.

## RESULTS

Minimum age of the patients of primary PPH was 20 years and maximum age was 40 years with mean age  $32.43 \pm 6.23$  years. Patient were divided into 4 age groups i.e. age group 20-25 years, 26-30 years, 31-35 years and 36-40 years. In age group 20-25 years there were 36 (30%) patients, in age group 26-30 years 26 (21.67%) patients, age group 31-35 years 19 (15.83%) patients and in age group 36-40 years 39 (32.5%) patients. (Table 1)

Primiparous were 36 (30%) followed by Multiparous 81 (67.5%) and Grand multiparous were 3 (2.5%). (Table 2)

Uterine atony was the commonest cause of primary PPH that was observed in 78(65%) patients followed by retained placental tissue or membrane, 19(15.83%) patients, vaginal wall laceration 8(6.67%), cervical tear 4(3.33%), retained placenta 4 (3.33%), perineal tear 4 (3.33%) and extended episiotomy was observed 3 (2.5%) patients. (Table 3)

Hysterectomy was done in 50 (41.6%) patients, followed by B lynch suture was done in 1 (0.8%), Internal iliac artery ligation 1 (0.8%), Evacuation (12 (10%), Manual removal of placenta 20 (16.67%), Medical management 8 (6.7%) and Perennial & cervical tear repair was done in 28 (23.4%) cases. (Table 4)

**Table 1:** Age distribution

Age (years)	No.	%
20-25	36	30
26-30	26	21.67
31-35	19	15.83
36-40	39	32.5

**Table 2:** Frequencies of parity

Parity	No.	%
Primiparous (Po)	36	30
Multiparous (P1-4)	81	67.5
Grand multiparous (P≥5)	3	2.5

**Table 3:** Frequency of causes of primary PPH

Causes of primary PPH	No.	%
Uterine atony	78	65
Retained placental tissue or membrane	19	15.83
Vaginal wall laceration	8	6.67
Cervical tear	4	3.33
Retained placenta	4	3.33
Perineal tear	4	3.33
Extended episiotomy	3	2.5
Uterine tear	-	-
Coagulopathy	-	-

**Table 4:** Frequencies for different management options

Management	No.	%
Hysterectomy	50	41.6
B-lynch suture	1	0.8
IIAL (Internal iliac artery ligation)	1	0.8
Evacuation	12	10.0
Manual removal of placenta	20	16.7
Medical management	8	6.7
Perennial & cervical tear repair	28	23.4

## DISCUSSION

Primary postpartum haemorrhage is the blood loss of 500 ml or more in the 1st 24 hours of delivery of baby.<sup>11</sup> The prevalence varies from 4.5% to 19%. It is associated with significant maternal mortality and morbidity.<sup>12-13</sup> In developing countries, 28% maternal deaths are caused by PPH.<sup>13</sup> Prevalence in Pakistan is 34%.<sup>10</sup>

Minimum age of the patients of primary PPH was 20 years and maximum age was 40 years with mean age 32.43±6.23 years. In age group 20-25 years there were 30% patients, in age group 26-30 years 21.67% patients, age group 31-35 years 15.83% patients and in age group 36-40 years 32.5% patients. The largest incidence was seen in patients aged between 36-40 years (60%). Age influence the occurrence of PPH. Advancing age

is associated with primary PPH. In some studies the highest incidence of PPH was found in women more than 30 years of age.<sup>1,14</sup> Kashanian et al<sup>12</sup> found decreases blood loss with increasing age and greatest blood loss found to occur in mothers aged 15-19 years. But in the present study age limit was between 20-40 years.

In present study Primiparas with PPH were 30% followed by Multiparous 67.5% and Grand multiparous were 2.5%.

Magann<sup>15</sup> reported frequency of Primiparous as 41% which is higher than our study. But Hazara et al<sup>9</sup> reported frequency of Primiparas as 29% which is comparable with our study. In a study conducted by Khanum<sup>5</sup> found 18% primiparous, 25% multiparous and 57% grand multiparous which differ from this study. The commonest cause of primary PPH was found to be uterine

atony (65%). It was similar to the other local and international studies.<sup>1, 5, 13</sup>

In present study the most common procedure was Hysterectomy which was performed in 41.6% patients.

In present study, hysterectomy was performed in 41.66% patients. In countries with high resources, haemorrhage which requiring hysterectomy is supposed life threatening condition.<sup>16-17</sup> Sheikh et al reported in their study that uterine atony was one of the most common cause of PPH.<sup>1</sup>

## CONCLUSION

Maximum patients found in age group 36-40 years and most of the patients were multiparous. Uterine atony was the most common cause of primary PPH. Hysterectomy was performed in most of the cases.

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