

Evaluation of Magnitude of Post-Partum Hemorrhage and Along with its Risk Factors and Complications

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Abstract

Background: Post-partum hemorrhage (PPH) is accounts for near about 23% of maternal mortality all around the globe and also reported among most common cause of maternal mortality worldwide and also in Asian continent. Post-partum hemorrhage (PPH) is described as blood loss of 500 ml or more within the duration of 24 hours from the childbirth. Post-partum hemorrhage is the most common direct cause of maternal mortality and as well as maternal morbidity in India.

Material & Methods: The present prospective study was conducted at department of obstetrics and gynecology of our tertiary care hospital. The study duration was of one year from January 2021 to December 2021. A sample size of 100 was calculated at 95% confidence interval at 5% acceptable margin of error. Pregnant women who had vaginal delivery with 500mls or more blood loss and who had caesarean section with 1000 mls or more blood losses, were enrolled for study by simple random sampling.

Results: The most common etiology reported for the post-partum hemorrhage was atonicity of the uterus which was found in 82% of the cases. PIH was reported in 34% pregnant women which was followed by APH reported in 24% pregnant women. Prolonged labour was reported in 17% cases of PPH and retained placental products were reported in 9% cases of PPH. Large baby was reported in 8% pregnant women and Genital tract Injuries present in 7% cases of PPH. PPH due to ruptured uterus was reported in 5% pregnant women and multi parity reported in 5% cases of PPH. Infections were reported in 4% cases of PPH and Uterine Inversion reported in 1% cases of PPH. Among majority of cases uterotonics with less than 2 blood transfusions was method of management, however in some cases peritoneal repair and surgical interventions were also required.

Conclusion: We concluded from the present study that atonicity of the uterus was responsible for PPH among majority of cases. PPH can be effectively managed by active management of the third stage of labour along with uterotonics and blood transfusions, in some cases peritoneal repair and surgical interventions were also required.

Keywords: Postpartum hemorrhage, Atonicity, Maternal mortality.

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Introduction

Post-partum hemorrhage (PPH) is accounts for near about 23% of maternal mortality all around the globe and also reported among most common cause of maternal mortality worldwide and also in Asian continent [1]. Post-partum hemorrhage (PPH) is described as blood loss of 500 ml or more within the duration of 24 hours from the childbirth. Post-partum hemorrhage is the most common direct cause of maternal mortality and as well as maternal morbidity in India, reported among various researches and accounts for near about 25% maternal deaths. [2]. It has been reported in many

previous studies that these maternal deaths from PPH represents only very few cases as the tip of the iceberg and main case load and actual numbers are hidden and submerged [3].

The early diagnosis for the prevention and management of the post-partum hemorrhage, it is mandatory to incorporate clinical audits in hospital administration to improve the quality of care and training of health care professionals programs based on international guidelines along with all active management of the third stage of labour is essential [4]. To decrease the burden of maternal

mortality, International Federation of Gynecology and Obstetrics initiate strategies along with the International Confederation of Midwives to combat the burden of post-partum hemorrhage. The main emphasis of this joint initiative was to prevent and manage the post-partum haemorrhage [5]. Despite of increase in deliveries by the help of a skilled birth attendant at home or increase in number of hospitalized deliveries, post-partum hemorrhage still remains the most common direct cause of maternal mortality in India. Hence, to prevent the PPH it is mandatory to incorporate the active management of the third stage of labour along with normal delivery process [6].

Therefore for combat the situations various teaching and training workshop are scheduled for hands-on training including lectures and audio-visual presentations, to estimate the amount of blood loss, to bimanual uterine compression, to train on manual removal of placenta and also to manage of retained placenta contents, management of uterine tamponade, to apply compression sutures, to perform uterine devascularization and ligation of internal iliac artery and repair of injuries during labour [7]. Hence, we conducted present study to find burden of post-partum hemorrhage along with its risk factors at our tertiary care hospital.

Materials & Methods

The present prospective study was conducted at department of obstetrics and gynecology of our tertiary care hospital. The study duration was of one year from January 2018 to December 2018. A sample size of 100 was calculated at 95% confidence interval at 5% acceptable margin of error. Pregnant women who had vaginal delivery with 500mls or more blood loss and who had caesarean section with 1000mls or more blood

losses, were enrolled for study by simple random sampling. Clearance from Institutional Ethics Committee was taken before start of study. Written informed consent was taken from each study participant.

The data were collected by predesigned, multiple response type of questionnaire from each pregnant woman along with general physical and clinical examination. Pregnant women who were requiring surgical intervention along with more than two blood transfusions and pregnant women requiring hysterectomy were excluded from the study. Data analysis was carried out using SPSS v22. All tests were done at alpha (level significance) of 5%; means a significant association present if p value was less than 0.05.

Results

In the present study a total of 100 pregnant women who had post-partum hemorrhage were enrolled and the study procedure explained. In our study the patients were aged from 20 to 39 years, the mean age of the enrolled pregnant women was 24.45 ± 4.76 years. There were no pregnant women in the present study who aged less than 18 years of age. In the present study majority of pregnant women had normal vaginal delivery 70 and 30% of pregnant women had caesarian section. Out of total, majority of pregnant women were primigravida 54% and 36% of pregnant women were gravida 2 and 10% of pregnant women were gravida 3. In the present study the most common complication was anemia in 68% pregnant women. DIC was seen in 5% pregnant women and other complications were present in 7% pregnant women respectively. No complications were seen in 20% pregnant women. There was no maternal mortality reported in present study. (Table 1)

Table 1: Distribution of study participants according to study parameters

Parameters	No. of cases	
Mode of delivery	NVD	70%
	LSCS	30%
Gravid status	Primigravida	54%
	Gravida 2	36%
	Gravida 3 and above	10%
Complications	Anemia	68%
	DIC	5%
	Others	7%
	No Complications	20%

In the present study, the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus which was found in 82% of the cases. PIH was reported in 34% pregnant women which was followed by APH reported in 24% pregnant women. Prolonged labour was reported in 17% cases of PPH and retained

placental products were reported in 9% cases of PPH. Large baby was reported in 8% pregnant women and Genital tract Injuries present in 7% cases of PPH. PPH due to ruptured uterus was reported in 5% pregnant women and multi parity reported in 5% cases of PPH. Infections were reported in 4% cases of PPH and Uterine Inversion

reported in 1% cases of PPH. Among majority of cases uterotonics with less than 2 blood transfusions was method of management, however

in some cases peritoneal repair and surgical interventions were also required. (Table 2)

Table 2: Distribution of study participants based upon risk factors and causes of PPH.

Risk factors	No. of cases
Atonicity	82%
PIH	34%
APH	24%
Prolonged labour	17%
Retained Placenta	9%
Large baby	8%
Genital tract Injuries	7%
Ruptured Uterus	5%
Multi parity	5%
Infection	4%
Uterine Inversion	1%

Discussion

In the present study a total of 100 pregnant women who had post-partum hemorrhage were enrolled and the study procedure explained. In our study the patients were aged from 20 to 39 years, the mean age of the enrolled pregnant women was 24.45 ± 4.76 years. There were no pregnant women in the present study who aged less than 18 years of age. In the present study majority of pregnant women had normal vaginal delivery 70 and 30% of pregnant women had caesarian section. Similar results were obtained in a study conducted by Nigeen W et al among cases of post partum hemorrhage and reported magnitude of PPH was 3% in their study. The mean age of pregnant women was 35 ± 3 years. [8]. Similar results were obtained in a study conducted by Chitra S et al among 500 cases of post partum hemorrhage and reported magnitude of PPH was 3.4% and out of them majority of pregnant women were primigravida [9]

In the present study, out of total, majority of pregnant women were primigravida 54% and 36% of pregnant women were gravida 2 and 10% of pregnant women were gravida 3. In the present study the most common complication was anemia in 68% pregnant women. DIC was seen in 5% pregnant women and other complications were present in 7% pregnant women respectively. No complications were seen in 20% pregnant women. There was no maternal mortality reported in present study. Similar results were obtained in a study conducted by Chandrika S et al among cases of post partum hemorrhage and reported magnitude of PPH was 1% in their study and out of them majority of pregnant women were multipara. The most complication was found in their study was anemia [10]. Similar results were obtained in a study conducted by Shaikh et al among cases of post partum hemorrhage and reported magnitude of

PPH was 2% in their study out of them majority of pregnant women were primigravida [11].

In the present study, the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus which was found in 82% of the cases. PIH was reported in 34% pregnant women which was followed by APH reported in 24% pregnant women. Prolonged labour was reported in 17% cases of PPH and retained placental products were reported in 9% cases of PPH. Large baby was reported in 8% pregnant women and Genital tract Injuries present in 7% cases of PPH. PPH due to ruptured uterus was reported in 5% pregnant women and multi parity reported in 5% cases of PPH. Infections were reported in 4% cases of PPH and Uterine Inversion reported in 1% cases of PPH. Among majority of cases uterotonics with less than 2 blood transfusions was method of management, however in some cases peritoneal repair and surgical interventions were also required. Similar results were obtained in a study conducted by Tasneem et al among cases of post partum hemorrhage and reported magnitude of PPH was 3.5% in their study and the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus [12]. Similar results were obtained in a study conducted by Pratima D et al among cases of post partum hemorrhage and reported magnitude of PPH was 2% in their study and the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus [13]. Similar results were obtained in a study conducted by Naina Kumar et al among cases of post partum hemorrhage and reported magnitude of PPH was 2% in their study and the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus and out of them majority of cases uterotonics with less than 2 blood transfusions [14].

Conclusion

We concluded from the present study that atonicity of the uterus was responsible for PPH among majority of cases. PPH can be effectively managed by active management of the third stage of labour along with uterotonics and blood transfusions, in some cases peritoneal repair and surgical interventions were also required.

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