

CLINICAL EVALUATION OF POST-PARTUM HAEMORRHAGE AT TERTIARY CARE HOSPITAL

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ABSTRACT:

Background: 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 reported to be responsible for more than 30% of maternal deaths and stated as most common cause of maternal mortality in Asia. Post-partum hemorrhage accounts for most common direct etiology of maternal mortality rate in India. **Material & Methods:** In the present study, 200 pregnant women who had vaginal delivery with 500 ml 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. **Results:** The most common etiology reported for the post-partum hemorrhage was atonicity of the uterus which was found in 77% of the cases. Traumatic cause for PPH was reported among 10% of the women. Atonicity with the traumatic cause both were reported in 5% of the pregnant women. Retained placental contents were found responsible in 3% of the pregnant women. Uterine inversion and infections were reported among 2% pregnant women respectively. Bleeding diathesis was reported in 1% of the pregnant women. **Conclusions:** The most common etiology reported for the post-partum hemorrhage was atonicity of the uterus. The post-partum hemorrhage was managed by the use of uterotonics and by applied active management of the third stage of labour along with blood transfusions. In some cases, surgical intervention was also required.

Keywords: Postpartum haemorrhage, Atonicity, uterotonics.

INTRODUCTION

The Post-partum hemorrhage (PPH) is described as blood loss of 500 ml or more within the duration of 24 hours from the childbirth (1). Post-partum hemorrhage accounts for most common direct etiology of maternal mortality rate in India. Post-partum hemorrhage is reported to be responsible for more than 30% of maternal deaths and stated as most common cause of maternal mortality in Asia (2). To

decrease the burden of maternal mortality, International Federation of Gynaecology 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 hemorrhage (3).

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 (4). 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 (5). 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 (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 clinically evaluate post-partum hemorrhage at our tertiary care hospital.

MATERIALS & METHODS

The present prospective study was conducted at department of obstetrics and gynaecology of our tertiary care hospital. The study duration was of one year from June 2017 to May 2018. A sample size of 200 was calculated at 95% confidence interval at 10% acceptable margin of error by epi info software version 7.2. Pregnant women who had vaginal delivery with 500mls or more blood loss and who had caesarean section with 1000 ml 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 200 pregnant women who had post-partum hemorrhage were enrolled and the study procedure explained. In our study the patients were aged from 19 to 40 years, the mean age of the enrolled pregnant women was 23.88 ± 3.66 years. There were no pregnant women in the present study who aged less than 19 years of age. Majority of them were in the age group of 21-30 years (49%). 40% of the pregnant women were in the age group of 31- 40 years and 11% of the pregnant women were in the age group of equal to or less than 20 years. On the parity-wise categorization of the pregnant women it was found that majority of them were multiparous, out of them maximum number of women had one or two living children (52%), 35% of them were primipara while rest 13% were had 3 or more living children.(Table 1)

In the present study, the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus which was found in 77% of the cases. Traumatic cause for PPH was reported among 10% of the women. Atonicity with the traumatic cause both were reported in 5% of the pregnant women. Retained placental contents were found

responsible in 3% of the pregnant women. Uterine inversion and infections were reported among 2% pregnant women respectively. Bleeding diathesis was reported in 1% of the pregnant women. (Table 2)

Table 1: Age and parity wise distribution of study participants.

Variables		No. of cases
Age	<20	11%
	21-30	49%
	31-40	40%
Parity	Primi	35%
	1-2	52%
	≥3	13%

Table 2: Distribution of study participants based upon prevalence of PPH.

Type of PPH	No. of cases
Atonic PPH	77%
Traumatic PPH	10%
Mixed (Atonic+ Traumatic)	5%
Retained placenta	3%
Inversion of uterus	2%
Infection	2%
Bleeding diathesis	1%

Table 3: Distribution of study participants based upon clinical features.

Type of PPH	No. of cases
Uterotonics +<2 blood transfusions	83%
Perineal tear repair	11%
Surgical intervention	6%
Total	100%

In the present study, the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus, hence the uterotonics with or without blood transfusions were the most common intervention applied among 83% pregnant women in the present study. Among 11% of the PPH cases peritonal tear repair was used for the treatment.

Among 6% of the PPH cases the surgical interventions was used for the treatment. (Table 3)

DISCUSSION

Many studies had been conducted to know the burden of the post-partum hemorrhage and reported that the magnitude of post-partum hemorrhage varies from 2% to 11% of the total deliveries (8). In the present study the magnitude of post-partum hemorrhage was observed to be 2.3%. Similar findings obtained in a previous study reported that the prevalence of post-partum hemorrhage was 3%. The mean age of pregnant women in their study was 35.4±3.7 years. The Retained contraception products were the most common etiology for PPH in their study (9).

In the present study a total of 200 pregnant women who had post-partum hemorrhage were enrolled and the study procedure explained. In our study the patients were aged from 19 to 40 years, the mean age of the enrolled pregnant women was 23.88 ± 3.66 years. There were no pregnant women in the present study who aged less than 19 years of age. Majority of them were in the age group of 21-30 years (49%). 40% of the pregnant women were in the age group of 31-40 years and 11% of the pregnant women were in the age group of equal to or less than 20 years. On the parity-wise categorization of the pregnant women it was found that majority of them were multiparous, out of them maximum number of women had one or two living children (52%), 35% of them were primipara while rest 13% were had 3 or more living children. Similar findings were reported in a study conducted by Tasneem et al among 1333 cases of post-partum hemorrhage with a overall prevalence of 3.55% (10).

In the present study, the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus which was found in 77% of the cases. Traumatic cause for PPH was reported among 10% of the women. Atonicity with the traumatic cause both were reported in 5% of the pregnant women. Retained placental contents were found responsible in

3% of the pregnant women. Uterine inversion and infections were reported among 2% pregnant women respectively. Bleeding diathesis was reported in 1% of the pregnant women. Similar findings were reported in a study conducted by Chandrika S et al among 12356 pregnant women and found the prevalence of post-partum hemorrhage was 1% and found the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus (11). Similar findings were reported in a study conducted by Chitra S et al among 250 cases and 250 controls and found prevalence of PPH was 3.4%. They found atonicity was the most common etiology behind PPH (12).

In the present study, the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus, hence the uterotonics with or without blood transfusions were the most common intervention applied among 83% pregnant women in the present study. Among 11% of the PPH cases peritoneal tear repair was used for the treatment. Among 6% of the PPH cases the surgical interventions were used for the treatment. Similar findings were reported in a study conducted by Pratima D et al and found the most common etiology reported for the post-partum haemorrhage was atonicity of the uterus (13). Similar results to present study was reported in a study conducted by Naina Kumar et al and found that uterotonics with or without blood transfusions were the most common intervention applied whenever required (14)

CONCLUSION

We concluded from the present study that the most common etiology reported for the post-partum hemorrhage was atonicity of the uterus. The post-partum hemorrhage was managed by the use of uterotonics and by applied active management of the third stage of labour along with blood transfusions. In some cases, surgical intervention was also required.

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