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RESEARCH ARTICLE
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PREVALENCE AND OUTCOME OF POSTPARTUM HAEMORRHAGE IN TERTIARY CARE HOSPITAL

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ABSTRACT

Background: The most terrifying event a woman may anticipate is death during childbirth, which continues to be the predominant cause of maternal mortality. Postpartum Haemorrhage is a common problem in less developed countries like Pakistan.

Objective: To assess the prevalence and outcome of Postpartum Haemorrhage in tertiary care hospital

Methodology: The current cross-sectional study was carried out at Pir Sayed Abdul Qadir Shah jilani institute of medical sciences Gambat. The duration of our study was six months from December 2019 to May 2020. In order to determine the frequency of PPH, all the deliveries were recorded during the study duration. Following written informed permission, demographic information including age, gestational age, and parity was entered into a pre-made proforma. For the data analysis we use SPSS version 24.

Results: In the current study, a total of 250 women were included. The mean age (SD) in the current study was 28 (4.32) years. The overall frequency of postpartum hemorrhage was 10 (4%). Amongst the 10 patients with postpartum hemorrhage, 8 (80%) patients were had primary postpartum hemorrhage while 2 (20%) patients had secondary postpartum hemorrhage. Based on causes of postpartum hemorrhage, uterine atony was observed in 5(50%) patients, perineal and vaginal tears in 3 (30%) and prolonged labor was observed in 2 (10%) patients. Based on outcomes, out of 10 postpartum hemorrhage patients, 1 (10%) women were observed with DIC and 1 (10%) patient had pulmonary edema. The overall mortality rate was 1 (10%).

Conclusion: Our study concludes that the frequency of postpartum haemorrhage is high with a prevalence of 4%. Primary PPH was common as compared to secondary PPH. The major cause of PPH was Uterine atony

Key words: Prevalence; Outcome; Postpartum Haemorrhage

INTRODUCTION

The most terrifying event a woman may anticipate is death during childbirth, which continues to be the predominant cause of maternal mortality (1). According to estimates, this causes 500,000

women's deaths globally each year (2). 1-5% of births are the consequence of this tragic cause, which may cause a death of a healthy mother with normal hemoglobin (3). WHO estimates that this reason accounts for 25% of fatalities (4, 5), highlighting the significance of this serious problem and the need for attention if we are to reduce mortality and the number of near-death events . According to a 2011 WHO study conducted in Pakistan, 1.6% of women had this potentially fatal illness (6). A very young patient who has PPH can die quite suddenly since it is an unexpected disorder that causes rapid blood loss. Blood loss of more than 500 ml during normal labor or more than 1000 ml during caesarean birth is indicative of the condition. Since it is just a preliminary estimate, it is often misconstrued, which leads to hypovolemia and shock when the patient arrives. The three delays—delay in seeking treatment, delay in getting to the hospital, and delay in obtaining adequate emergency obstetric care—are often experienced, particularly in poor nations, leading to a high PPH mortality rate. The relevant authorities need to handle these three delays in order to reduce PPH-related mortality and morbidity (4). Retained placenta, genital tract trauma, and uterine atony are the major causes of PPH. Less often but frequently the cause of severe PPH with acquired coagulopathy includes abnormal placentation, uterine rupture and placental abruption. Maintaining emphasis on trained care providers and ensuring the availability of affordable, accessible preventative and treatment alternatives will be necessary for strengthening the treatment of PPH in settings with limited funds. No such study has been carried out in our setting. The current study was therefore carried out to determine the prevalence and outcome of postpartum haemorrhage in tertiary care hospital.

MATERIALS AND METHODS

The current cross-sectional study was carried out at Pir Sayed Abdul Qadir Shah jilani institute of medical sciences Gambat. The duration of our study was six months from December 2019 to May 2020. The criteria for inclusion were all the women of all ages, with postpartum hemorrhage following vaginal birth and willing to be participant in our study. The criteria for exclusion were all the women with past history of bleeding problems, females on warfarin and all those who were not willing to take part in our study. In order to determine the frequency of PPH, all the deliveries were recorded during the study duration. Following written informed permission, demographic information including age, gestational age, and parity was entered into a pre-made proforma. Other information was collected, such as the duration of the labor, whether it was induced or augmented, the use of an episiotomy, spontaneous birth, time of placental delivery, and the use of a pad since delivery. Vital signs were tracked for the patient's hemodynamic condition, and the uterus was inspected to verify the contraction. By exploring the genital tract, uterine inversion or genital tract tears were monitored. The retained placental tissue was verified by radiological imaging. For the data analysis we use SPSS version 24. Mean and standard deviation were used to represent quantitative variables. Qualitative variables like the frequency PPH and outcomes were documented as frequency and percentages.

RESULTS

In the current study, a total of 250 women were included. The mean age (SD) in the current study was 28 (4.32) years. Based on age wise frequency, 30 (12%) patients were less than 20 years, 215 (86%) patients were 20-35 years while 5 (2%) patients were in age of more than 35 years. (Figure 1)The overall frequency of postpartum hemorrhage was 10 (4%). (Figure 2) Amongst the 10 patients with postpartum hemorrhage, 8 (80%) patients were had primary postpartum hemorrhage while 2 (20%) patients had secondary postpartum hemorrhage. (Figure 3) Based on parity, 45 (18%) patients were primiparas, multipara were 95 (38%) and 110 (46%) patients were grand multipara. Amongst the 10 patients with postpartum hemorrhage, frequency of spontaneous vaginal delivery was 3 (30%), instrumental delivery 4 (40%) and cesarean section was 3 (30%). Based on causes of postpartum hemorrhage, uterine atony was observed in 5(50%) patients, perineal and vaginal tears in 3 (30%) and prolonged labor was observed in 2 (10%) patients. Based on outcomes, out of 10

postpartum hemorrhage patients, 1 (10%) women were observed with DIC and 1 (10%) patient had pulmonary edema. The overall mortality rate was 1 (10%). (Table 1)

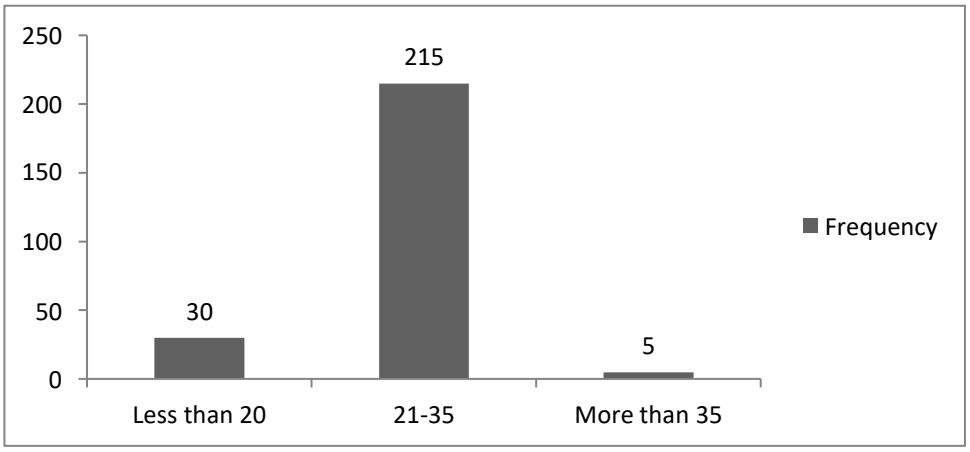

Figure 1: Age wise frequency of women enrolled in our study

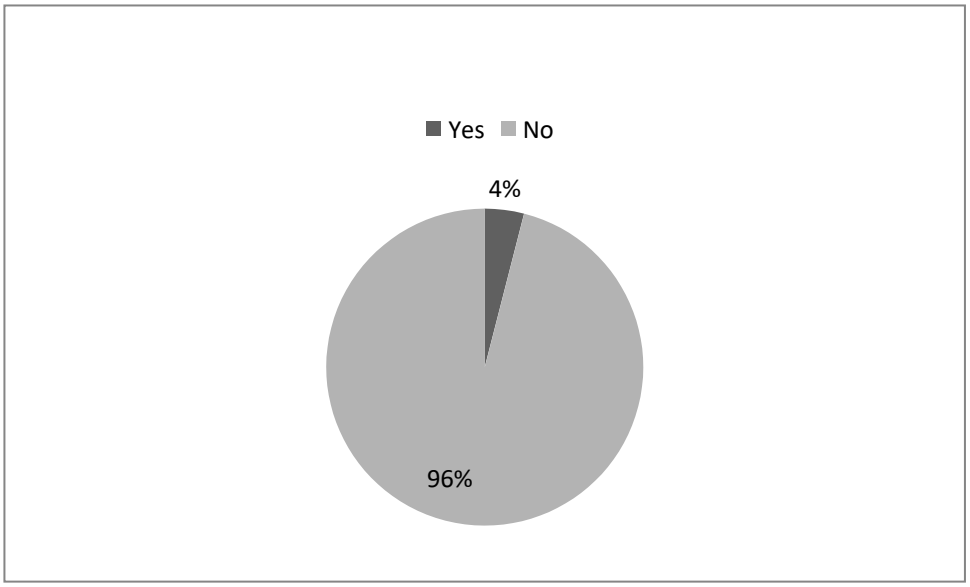

Figure 2: Overall frequency of PPH

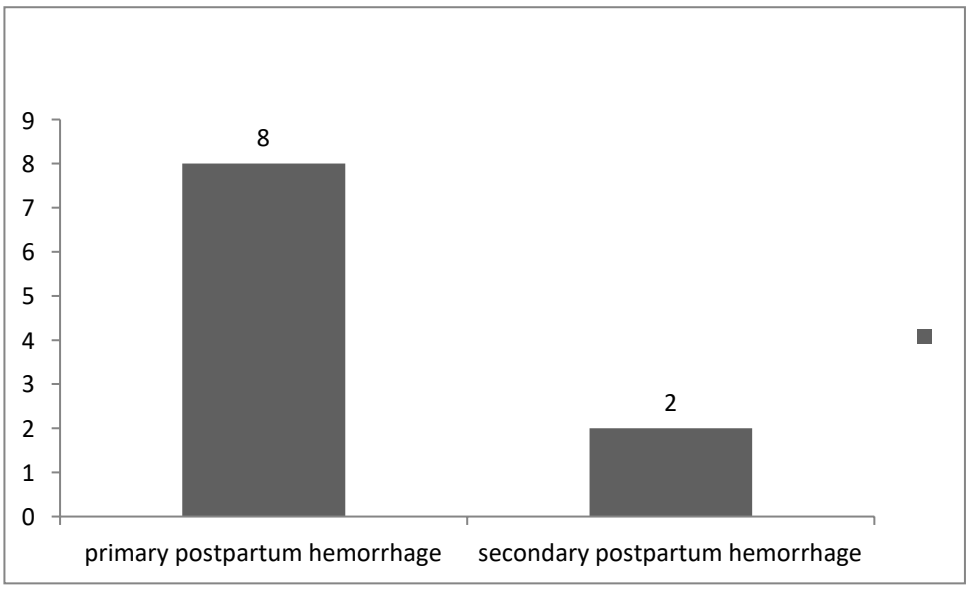

Figure 3: Frequency of primary and secondary postpartum hemorrhage

Table 1: Frequency of delivery, causes and outcomes in patients with postpartum hemorrhage

Parameter	Sub category	Frequency (%)
Delivery	spontaneous vaginal delivery	3 (30%)
	instrumental delivery	4 (40%)
	cesarean section	3 (30%)
Causes of PPH	uterine atony	5(50%)
	perineal and vaginal tears	3 (30%)
	prolonged labor	2 (10%)
Outcomes	DIC	1 (10%)
	pulmonary edema.	1 (10%)

Discussion

One of the major health problems affecting women of reproductive age, particularly in underdeveloped nations, is maternal death (7). PPH is attributed to 17–40% of the maternal deaths and 40% of the morbidity among mothers (8). According to a literature assessment, about 20,000 women in Pakistan died from reasons related to pregnancy and childbirth issues (9). According to reports, PPH occurs 34% more often in Pakistan than in advanced nations, where the rate is stated to be 2 to11% (7). High incidences of PPH are mostly caused by anemia, malnutrition, illiteracy, lack of knowledge, and a lack of health services in underdeveloped nations.

In the current study, a total of 250 women were included. The mean age (SD) in the current study was 28 (4.32) years. Based on age wise frequency, 30 (12%) patients were less than 20 years, 215 (86%) patients were 20-35 years while 5 (2%) patients were in age of more than 35 years. The overall frequency of postpartum hemorrhage was 10 (4%). In accordance with our study a previous study carried out by Nailla Yousuf et al. reported 3.27% PPH Which is almost similar with our findings (10). Bushra et al. reported that the frequency of postpartum hemorrhage in their study was 12.6% which is high than our findings (11). In contrary to our findings, a study piloted by S Ramani and B Vijaya reported 0.73% postpartum hemorrhage which is very low than our study (12). The total rate of PPH was 2.46% according to a different Pakistani research carried out at Lahore General Hospital Lahore by Gulfreen Waheed et al (13). But national literature also reports a somewhat greater occurrence. PPH has been reported to occur 7.1% of the time according to Humaira Naz et al (14) and as high as 21.3% of the time according to Gani et al. at the Khyber agency (15).

Amongst the 10 patients with postpartum hemorrhage, 8 (80%) patients were had primary postpartum hemorrhage while 2 (20%) patients had secondary postpartum hemorrhage. Based on parity, 45 (18%) patients were primiparas, multipara were 95 (38%) and 110 (46%) patients were grand multipara. Amongst the 10 patients with postpartum hemorrhage, frequency of spontaneous vaginal delivery was 3 (30%), instrumental delivery 4 (40%) and cesarean section was 3 (30%). A previous study done by Fouzia Gul et al. reported that majority of the patients with PPH have primary PPH which is in accordance with our findings (16). Another study reported 41% cases of primary PPH which is not in accordance with our findings (17).

Based on causes of postpartum hemorrhage, uterine atony was observed in 5(50%) patients, perineal and vaginal tears in 3 (30%) and prolonged labor was observed in 2 (10%) patients. Based on outcomes, out of 10 postpartum hemorrhage patients, 1 (10%) women were observed with DIC and 1 (10%) patient had pulmonary edema. A previous study also reported uterine atony as the major cause of PPH followed by perineal and vaginal tears. They also reported pulmonary edema and DIC as the outcomes of the PPH (11).

The overall mortality rate was 1 (10%). In accordance with our findings, another study reported 5% mortality rate due to PPH (10). Another study reported very low mortality rate of 1.78% than our study (12). The third stage of labor must be actively treated in order to reduce the incidence of PPH

associated with uterine atony (18). According to a Chinese-based investigation, postpartum PPH problems were common (6% prevalence) (19). Between 2% and 8% of people worldwide have PPH (20, 21). The prevalence of PPH caused by uterine atony was 50% in our study, which is greater than the 57.6% and less than the 80% described in other research (22, 23). Uterine atony has been found in 58% of PPH patients, according to a different research (24). Delivery at a facility with adequate medical supplies saves delays in identifying problems, transferring patients, and providing essential comprehensive treatment (25). It is crucial to identify the avoidable factors that contribute to PPH and its consequences in order to lower maternal morbidity and mortality. In this circumstance, standard prenatal care and skilled delivery attendants play crucial roles (26). Pakistan has a high mortality rate from pregnancy-related complications and primary PPH, which is an obstetrical disorder.

Conclusion

Our study concludes that the frequency of postpartum haemorrhage is high with a prevalence of 4%. Primary PPH was common as compared to secondary PPH. The major cause of PPH was Uterine atony. Other studies based on large sample size must be conducted for better results

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