ORIGINAL ARTICLE

Postpartum Hemmorhage Experience at a Tertiary Care Hospital Lahore

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ABSTRACT

Background: Postpartum hemorrhage (PPH) is one of the leading causes for the maternal morbidity and mortality worldwide. Situation is even worse in underdeveloped countries where access to healthcare facilities and provision of services is poor.

Aim: To determine the frequency and causes of PPH.

Study design: Cross sectional study.

Sampling technique: Convenient sampling.

Setting: Sharif Medical and Dental college/SMCH in 2 year duration from September 2013 to August 2015.

Methods: Sixty cases of PPH were recruited in Gynecology and Obstetrics department of Sharif Medical and Dental College Lahore during this period fulfilling the inclusion criteria. Demographic information was recorded. Causes for PPH were analyzed. Morbidity parameters including number of blood transfusions, duration of hospital stay, peripartum hysterectomy, and intensive care unit admissions were assessed. All data was analyzed by SPSS 23. Frequency and percentages calculated for quantitative data. Mean calculated for age and gestational age.

Results: During this period 60 cases of PPH were recruited out of 2090 admissions. Frequency of PPH was 2.87%. Mean age of patients was 27.25±4.63 years. Mean duration of pregnancy is 36.54±2.840 weeks. Major cause identified was uterine atony. When assessed for morbidity, mean hospital admission was 4.48±5.86 days, estimated blood loss was 1711±636.22ml, ICU admissions were 18%, peripartum hysterectomy were in 7% and mean blood transfusion was 2.7±1.36.

Conclusion: Post partum hemorrhage is a deadly disease. Early recognition of the amount of blood loss and identification of predisposing factors can lead to reduction in morbidity and mortality related to PPH. Written hospital protocols and regular drills of the all the involved personnel can reduce the delay in provision of care.

Key words: Post partum hemorrhage, maternal morbidity, maternal mortality.

INTRODUCTION

Post partum hemorrhage (PPH) is the blood loss in excess of more than 500ml after normal delivery and more than 1000ml after cesarean section[1] or bleeding from the genital tract that is sufficient to cause hemodynamic instability (reduced blood pressure, increased pulse rate) or decrease in the hematocrit by 10% is called as post partum hemorrhage[2].. Primary PPH is blood loss occurring within 24 hours. While secondary PPH is the blood loss after more than 24 hours upto 6 weeks postpartum[3].

According to WHO, in sub Saharan Africa hemorrhage is the one of the most common cause of maternal mortality it is responsible for 35% cases in the region and 60% in some individual countries. In Pakistan the reported prevalence of postpartum hemorrhage is 34%[4].

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Uterine atony is responsible for upto 80-90% cases of PPH.[3] other causes of PPH include genital tract trauma in lower or upper genital tract, uterine inversion, retained product of conception/ retained placenta, acquired coagulopthy and DIC. Developed countries have developed strategies to deal with PPH but underdeveloped countries are still lagging behind[5].

The rationale of present study is to evaluate the frequency of PPH in our set up and the factors associated with it. Delays are seen in reaching the health care facilities and under estimating the amount of blood loss and lack of blood transfusions to adequately replace the blood loss. Based upon the results of our study, hospital protocol can be made to tackle these problems. As PPH is one of the leading causes of maternal morbidity and mortality and prevention of this deadly disease can reduce the incidence of maternal morbidity and mortality.

MATERIAL AND METHOD

This cross sectional study was carried out in the Department of Obstetrics & Gynaecology, Sharif

Medical and Dental college/SMCH in 2 year duration from September 2013 to August 2015. Sixty cases of PPH over a period of two years from September 2013 to August, 2015 were recruited in the Gynecology and Obstetrics department of Sharif Medical and Dental College Lahore using convenient sampling technique admitted in gynae ward. All patients fulfilling the inclusion criteria were recruited. Inclusion criteria were those patients having primary PPH, either delivered by normal vaginal delivery or cesarean section. Patient with any cause of PPH were included e.g., uterine atony, trauma, tissue and thrombin. Those patients who presented with secondary PPH, on anticoagulants and known bleeding disorders were excluded from the study.

Blood loss was estimated by subjective and objective measures. Subjective measures include number of soaked packs, blood clot estimation and measurement of blood in the suction bottles. Objective assessment includes serial hemoglobin monitoring and number of blood transfusions.
Morbidity was assessed by means of need for peripartum hysterectomy, intensive care unit admission, need and number of blood transfusions and number of days of hospitalization. Mortality was assessed by the number of death.

All the obtained data was entered on SPSS version 23. Parity, mode of delivery, place of delivery, and adherence of placenta were expressed as frequencies with percentages, while age, gestational age, estimated blood loss and number of blood transfusions was expressed as mean± SD.

RESULTS

During two years of study, total number of hospital admissions was 2090. Mean age of the patient in this study is 27.20±4.542 years. Mean gestational age was 36.54±2.840 weeks. About 27% patients were between 34-37 weeks. 11% patients were at more than 40 weeks of gestation. Most of the patients in the present study were multiparas, there were 16(27%) primigravidas while 3(5%) were grand multipara. Regarding the booking status of the patients, 42(70%) patients were unbooked in this study. While 18(30%) patients were booked, this explains the importance of booking during pregnancy. High risk cases were done at senior level. Most PPH in this study occur in the hospital 52(87%) the reason being is that most surgeries are performed in high risk with placenta previa. While 8 (15%) patients deliver at home and referred to the hospital after PPH.

During duration of 2 years, major mode of delivery was emergency lower segment cesarean section in 24 (40%) patients as shown in table 1. There were 21(35%) patient who had normal vaginal delivery, While 37 (62%) patients underwent lower segment cesarean section, out of which 24(40%) were emergency LSCS and 13 (24%) were elective LSCS. forty percent (n=24) patients had PPH after emergency LSCS and 2% (n=1.2) patient underwent emergency cesarean hysterectomy. Twenty four percent (n=14.4) patients of elective LSCS had PPH and 5% patients underwent peripartum hysterectomy and most of these cases were with major degree placenta previa. One (1.7%) patient underwent vacuum delivery and one (1.7%) patient had breech delivery at home and referred after having PPH.

Uterine atony was found in 25 (42%) cases of PPH. Genital tract trauma was seen in 15 (25%) cases. There were 14 (23%) cases of placenta previa and one (1.7%) case of uterine rupture as shown in table 2. Placental abruption and retained product of conception were seen in 3 (5%) patients each. Retained placenta was seen in one (1.7%) case and there was one (1.7%) patient with uterine inversion. Placenta was completely delivered in 87% cases while partially removed in 5% cases and adherence was seen in 7% cases. Mean estimated blood loss was 1709.76±657.193 ml as shown in table 3.

Morbidity was assessed by the number of days of hospitalization, which were 21.5 days on an average mean is 4.48±5.869. ICU admission was needed in 18% cases. There were total 4 (7%) cesarean hysterectomies done out of 60 cases. Three (5%) hysterectomies were done due to placenta accreta and one (1.7%) was done due to genital tract trauma. Out of which 5% were done after elective LSCS and 2% after emergency LSCS. Blood transfusion was needed in cases of severe PPH leading to anemia. The mean blood transfused was 4 units of blood. No maternal mortality was seen.

Table 1: Mode of delivery (n=60)

Mode of delivery	Frequency	%age
Breech delivery	1	1.7
Elective LSCS	13	21.7
Emergency LSCS	24	40.0
Spontaneous vaginal delivery	21	35.0
vaccuum delivery	1	1.7
Total	60	100.0

Table 2: Causes of PPH (n=60)

Causes	Frequency	%age
Uterine atony	25	42%
Genital tract trauma	15	25%
Placenta previa	14	23%
Placental abruption	3	5%
Retained placenta	1	1.7%
Uterine inversion	1	1.7%
Uterine rupture	1	1.7%
Total	60	100.0

Table 3: Estimated blood loss and blood transfusion (n=60)

	Mean	Std. Deviation
Number of Blood transfusion	2.2195	1.29445
Estimated blood loss	1709.76	657.193

DISCUSSION

One woman is dying every 4 minutes. Worldwide 140,000 deaths are due to PPH. PPH is 5th commonest cause of maternal deaths worldwide[7,8,9]. Post Partum hemorrhage is still considered a common cause of maternal morbidity and mortality in developed as well as in developing countries[10].

The frequency of PPH was 2.87% among 2090 admissions which is lower than the previous studies performed in Thailand (6%) [11] it is less than a local study performed in Lahore (7.2%) [12]. But closer to the local study performed in Liaquat National Hospital 1.7%.[13] This difference in frequency can be explained by the varying techniques of blood loss assessment during delivery till 24 hours post partum. Most of PPH occur in unbooked cases while a few cases occur in booked cases which differ from the study done in Liaquat National Hospital Karachi where all the cases were booked. [13] There were no deaths during the targeted time period. These finding are in comparison to the finding of various studies[7,8].

Regarding mode of delivery, most common mode was emergency LSCS, normal vaginal deliveries and elective LSCS respectively. Most cases of PPH occur after emergency LSCS which is comparable to the other studies performed in Pakistan.[13] Emergency caesareans are considered as the most significant factor and this highlight the importance of doing emergency caesarean with the correct timing and for the correct indication. Caution should be done while doing emergency cesarean section for PPH.

Grandmultiparity though considered as a risk factor for PPH but in the present study this was not a significant risk factor which is comparable to the other studies. [7, 8, 13] This can be justified as the incidence of caesarean is at a rise worldwide leading to the increase chances of placenta previa and complicated surgeries leading to PPH. The reduction in family size can also be a reason for less garndmultiparas in this study. Previous caesarean is also considered as a risk factor for PPH which is also found in our study. Placenta previa was found in 14 cases of PPH out of which 13 were major degree previa while one patient was with type 2 previa. This can be explained by the reason that our hospital is a referral centre and it receive patients from the periphery and high risk cases are usually done over here. Placental abruption was seen in 2 cases of severe post partum haemorrhage. Multiple gestation, obstructed labour, uterine inversion, polyhydramnios were found as independent risk factors in other patients which is comparable to the studies performed previously[7,8].

Uterine atony is the most common cause for primary PPH, was found in our study as a commonest factor (51%) which is similar to the studies performed previously where most common cause was found to uterine atony[7,9,11,13]. The second commonest cause found in our study was placenta previa (25%) followed by genital tract trauma which was found in 11 cases of PPH[13]. This finding is comparable to the finding of a study performed in Agha Khan hospital Karachi where placenta previa was the second commonest cause of PPH.[14]

Morbidity was assessed by the number of days of hospitalization, which were 21.5 days on an average mean is 4.48±5.869 similar to the local studies[14,15]. ICU admission was needed in 18% cases. There were total 4(7%) cesarean hysterectomies done out of 60 cases which is slightly lower than a local study performed at AKU (12%)[14]. Blood transfusion was needed in cases of severe PPH leading to anemia depending upon the amount of blood loss.

CONCLUSION

Post partum hemorrhage is a deadly disease and it is one of the nightmares of obstetricians. Early recognition of the amount of blood loss and identification of predisposing factors can lead to reduction in morbidity and mortality related to PPH. Written hospital protocols and regular drills of the all the involved personnel can reduce the delay in provision of care.

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