

Post partum haemorrhage: Prevalence, morbidity and management pattern in Dhulikhel Hospital

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Abstract

Background: Post partum haemorrhage (PPH) is the leading cause of maternal death worldwide. PPH occurs in up to 18% of total births. Among different factors, PPH due to uterine atony is the primary and direct cause of maternal mortality comprising about 90%.

Objective: The objective of the present study was to assess the prevalence, morbidity and management pattern of PPH in Dhulikhel Hospital.

Materials and methods: Hospital based retrospective study was carried out at Kathmandu University School of Medical Science, Dhulikhel Hospital from the period of January 2007 till October 2009. The study group included total of 60 patients. All women who had PPH both primary and secondary were studied. Information regarding total number of deliveries obtained from Obstetrics ward. The cases with PPH were identified and detail records were reviewed using standard format. The main outcome measures used for the analysis were amount of blood loss, cause of PPH and treatment methods.

Results: In Dhulikhel hospital, from January 2007 till October 2009 a total of 3805 deliveries took place. Out of which 60 women had PPH. The prevalence was 16/1000 deliveries. There are 41 (68.3%) cases of primary PPH and 19 (31.7%) cases of secondary PPH. PPH was found more in home deliveries, unbooked case and in multiparas. The mean blood loss was 1055ml.

As an aetiology, retained placenta and retained placental bits of tissue was found in 37(61.7%) cases, atonic uterus in 10 (16.7%) cases, genital tract trauma in 8(13.3%), sepsis of genital tract in 3(5%), case of ruptured uterus in one case and a case of angle bleeding from previous uterine scar following caesarean section.

Among all 15 (25%) cases underwent manual removal of placenta, 5(8.3%) underwent controlled cord traction, 3 (5%) underwent manual removal of placenta followed by check curettage in cases of retained placenta, 16 (26.7%) cases were managed by check curettage for retained bits of placental tissue and membrane. Trauma in genital tract was managed by repair of trauma in 6 (10%) cases. Hysterectomy was required in 3 (5%) cases. Conservative management with uterotonics only required in 12 (20%) cases.

Conclusion: Active management of third stage of labour can prevent PPH so delivery by skilled hand in hospital should be promoted. Secondary PPH besides primary can result in significant maternal morbidity. It also deserves similar attention.

Key words: Atonic uterus, Postpartum haemorrhage

Post partum haemorrhage is the leading cause of maternal death worldwide¹. 14 million women suffer from PPH every year. Among them 1,40,000 die and 1.6 million survive with long term disability due to anaemia². PPH occurs in up to 18% of total births³. Blood loss of more than a litre is considered physiologically significant and can result in hemodynamic instability⁴. Even with appropriate management, approximately 3% of vaginal deliveries will result in severe PPH.

Among different factors, PPH due to uterine atony is the primary and direct cause of maternal mortality

comprising about 90%. Retained products of conception, trauma in genital tract and coagulation abnormalities are important causes of PPH. Sepsis of genital tract being the primary cause for secondary PPH⁵.

Variety of acceptable methods of treatment are available nowadays and are already proved to be safe and effective but still occasionally proves to be inadequate.

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Materials and methods

This hospital based retrospective study was carried out at Kathmandu University School of Medical Science, Dhulikhel Hospital from the period of January 2007 till October 2009. The study group included the women who had PPH amongst the women who underwent deliveries during the specified time period. All women who had PPH both primary and secondary were studied.

Information regarding total number of deliveries was obtained from Obstetrics ward. The cases with blood loss more than 500 ml during vaginal delivery and more than 1000ml during caesarean section were identified and detail review of their records were carried out using standard format. Data recorded were age, parity, ANC, onset of labour, place of delivery, mode of delivery, amount of bleeding, duration of bleeding, causes of PPH, resuscitation, transfusion and treatment methods.

The main outcome measures used for the analysis were amount of blood loss, cause of PPH and treatment methods.

The data collected were analyzed using analysis software SPSS. Statistical analysis was performed with the use of chi-square. A p-value of <0.05 was considered statistically significant.

Results

In Dhulikhel hospital, from January 2007 till October 2009 a total of 3805 deliveries took place. Out of which 60 women had PPH. The prevalence was 16 per 1000 deliveries. Mean age of the study population was 26.4 yrs. As per ethnic distribution, PPH was more common in Tamang i.e- 32 (53%) followed by Chhetri 12 (20%), Newar 10 (16.7%) and Brahmin 6(10%) respectively. There were 41 (68.3%) cases of primary PPH and 19

(31.7%) cases of secondary PPH. PPH was found to be more in unbooked cases 44(73.3%) than booked cases 16 (26.7%).

Study also shows that PPH following home delivery was maximum 35 (58.3%) followed by hospital delivery 18 (30%) and health post delivery 7 (11.7%).

PPH was seen maximum with spontaneous onset of labor 58(96.7%) and less with induced labor 2(3.3%). The mean blood loss was 1055ml with the range of 500 to 2100 ml.

Retained placenta and retained placental bits of tissue was found in 37(61.7%) cases, atonic uterus in 10 (16.7%) cases, genital tract trauma in 8(13.3%), sepsis of genital tract in 3(5%), case of ruptured uterus in one case and a case of angle bleeding from previous uterine scar following caesarean section.

Among total case of PPH 53 (88.3%) required resuscitation and 7 (11.7%) did not. Among 60 case 35 (58.3%) patients required blood transfusion. 8 pint being transfused maximum.

15 (25%) of cases underwent manual removal of placenta, 5(8.3%) underwent controlled cord traction and 3 (5%) underwent manual removal of placenta followed by check curettage in cases of retained placenta. 16 (26.7%) cases were managed by check curettage for retained bits for placental tissue and membrane. Trauma in the genital tract were managed by repair of trauma 6 (10%) cases. 3 (5%) cases required hysterectomy for post partum haemorrhage management. 12 (20%) patients did not require surgical management and managed conservatively with uterotonics.

Table 1: Table showing type of PPH in booked and unbooked cases with type of PPH

Type of case	Total No	Primary PPH (%)	Secondary PPH (%)
Booked case	16	6 (37.5)	10 (62.5)
Unbooked case	44	35 (79.5)	9 (20.5)

Table 2: Table showing PPH in different site of delivery

	Home delivery	Health post delivery	Hospital delivery	Total
Booked case	1	0	15	16
Unbooked case	34	7	3	44

Table 3: Table showing type of PPH and parity

	Primipara	Multipara	Grandmultipara	Total
Primary PPH	11	24	6	41
Secondary PPH	6	13	0	19

Table 4: Table showing type of PPH and Mode of delivery

	Vaginal Delivery	Cesarean delivery	Total
Primary PPH	40	1	41
Secondary PPH	16	3	19

Table 5: Table showing cause of PPH

Cause of PPH	Frequency	Percentage (%)
Atonic Uterus	10	16.7
Retained placenta and Retained placental bits of tissue	37	61.7
Trauma	8	13.3
Sepsis	3	5.0
Angle bleeding following C/S	1	1.7
Rupture Uterus	1	1.7
Total	60	100.0

Discussion

This study was conducted at Dhulikhel Hospital, department of Obstetrics and Gynaecology from 2007 to 2009. Like in other studies the prevalence of primary PPH was also found to be higher at our centre^{6,7}.

Atonic PPH remains the most important cause as is seen in other studies⁸.

Our studies shows retained placenta seems to be the culprit for primary PPH with 61.7% of patients followed by atonic PPH and traumatic PPH respectively. The percentage of PPH was more common in patients who were unbooked compared to our booked cases. The reason was active management of 3rd stage being practiced in our hospital. Lalonde A et al in their study showed that active management of third stage of labour can prevent PPH⁹. Though our hospital caters its services to all ethnic population we noticed that PPH was more common in Mongolian race (Tamang) which is very similar to the study done by Pramila et.al⁷. Though we know that PPH is more common in grandmultipara by definition more than 5 deliveries, we found the prevalence to be higher in multiparas (>2deliveries)¹⁰.

The percentage of secondary PPH was 31.7% in our study. It is due to many patients undergoing home delivery without septic precaution. Almost all patients with secondary PPH underwent USG and found 68.4% presented with retained bits of placenta and sepsis. Almost all cases received septic coverage before surgical management. We encountered a case of secondary PPH due to angle bleeding in uterine incision site following LSCS. All the patients with secondary PPH received septic coverage by I/V antibiotics. Another case of PPH was due to ruptured uterus and that case underwent hysterectomy.

In other studies cases of primary PPH due to retained placenta was managed by CCT whereas we managed 15(25%) with MRP^{6,7}. The reason was late presentation of our patients to hospital following home delivery.

Check curettage for management of PPH after resuscitation and septic coverage was done in 16 (26.7%).

Blood transfusion was given to total 30 (50%) patients whose Hb% was less than 7gm% the reason for this being excessive blood loss due to various reason, other reason being late presentation to hospital and their ANC Hb% which itself was low. 35(58.3%) patients required blood transfusion, maximum of 8 Units was transfused in patient with angle bleeding in uterine incision site following LSCS. Transfusion rate was comparatively higher in our study compare to study done by Pramila et.al⁷.

Conclusion

Active management of third stage of labour can prevent PPH so delivery by skilled hand in hospital should be promoted. Secondary PPH besides primary one can result in significant maternal morbidity. It also deserves similar attention.

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