

ORIGINAL ARTICLE

Determination of risk factors of post-partum Haemorrhage

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ABSTRACT:

Background: Post-partum haemorrhage (PPH) is responsible for approximately 23% of maternal mortality worldwide. The present study was conducted to determine cases of post-partum haemorrhage (PPH). **Materials & Methods:** 68 cases of PPH were evaluated. Risk factors of PPH were also recorded. **Results:** Age group 20-30 years had 38, 30-40 years had 18 and >40 years had 12 cases. The difference was significant ($P < 0.05$). Mode of delivery was vaginal in 42, LSCS in 26, gravida was primi in 46, multigravida in 22. Complications found to be anemia in 24, DIC in 11 and others in 4 cases. The risk factors found to be APH in 23, PIH in 12, atonicity in 4, retained placenta in 12, prolonged labour in 13 and infection in 4 cases. The difference was significant ($P < 0.05$). **Conclusion:** Most common risk factors for PPH was APH, PIH and prolonged labour.

Key words: PPH, Labour, Vaginal

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INTRODUCTION

Post-partum hemorrhage (PPH) is responsible for approximately 23% of maternal mortality worldwide and also reported as the most common cause of maternal mortality in Asian continent.¹ The most common direct cause of maternal deaths and as well as maternal morbidity in India is post-partum hemorrhage, reported in various researches and accounts for 25% maternal deaths. Post-partum hemorrhage is characterized by loss of blood equal to or more than 500 ml within the 24 hours of the labour.² Maternal deaths due to post-partum hemorrhage are significantly low (approximately 8%) in developed countries. i.e. pregnant women giving childbirth in the developing countries are exposed to greater risk of dying during labour than countries in their developed counterparts. Hence, this suggests that it is preventable cause of maternal mortality.³

Although there is no agreed definition for MT worldwide, researchers have applied a transfusion of ≥ 10 units of red blood cell (RBC) within 24 h, 50% blood volume loss within 3 h, or a transfusion of ≥ 4 RBC units within 1 h as criteria for MT.⁴ PPH can only be diagnosed if the parturient has lost more than 500 mL or 1000 mL of blood. Another limitation of diagnosing PPH is that no ideal method to precisely

calculate how much blood has been lost has been reported to date.⁵ Visual estimation, which is the most convenient method of blood loss estimation, underestimates blood loss by half the actual amount. The Hb or HCT method has a delayed effect since intensive hemorrhage might cause the blood to concentrate in a short time, leading to a false impression that the value is within normal limits.⁶ The present study was conducted to determine cases of post-partum hemorrhage (PPH).

MATERIALS & METHODS

The present study was conducted among 68 cases of PPH reported in the department of Gynaecology. All patients were informed regarding the study and their consent was obtained.

Data such as name, age, etc. was recorded. A thorough clinical examination was performed in all patients. Clinical features, including maternal age, previous gestational history, mode of delivery, primary cause of hemorrhage, number of red cell concentrate units transfused, and outcomes, were evaluated. Risk factors of PPH were also recorded. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

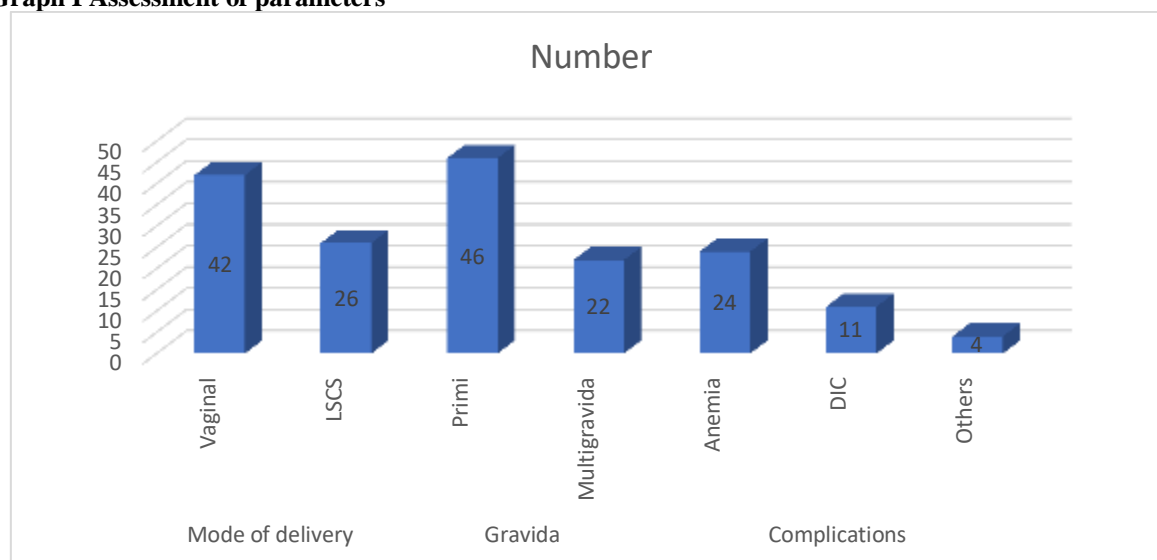
Age group (Years)	Number	P value
20-30	38	0.04
30-40	18	
>40	12	

Table I shows that age group 20-30 years had 38, 30-40 years had 18 and >40 years had 12 cases. The difference was significant ($P < 0.05$).

Table II Assessment of parameters

Parameters	Variables	Number	P value
Mode of delivery	Vaginal	42	0.04
	LSCS	26	
Gravida	Primi	46	0.05
	Multigravida	22	
Complications	Anemia	24	0.01
	DIC	11	
	Others	4	

Table II, graph I shows that mode of delivery was vaginal in 42, LSCS in 26, gravida was primi in 46, multigravida in 22. Complications found to be anemia in 24, DIC in 11 and others in 4 cases. The difference was significant ($P < 0.05$).

Graph I Assessment of parameters**Table III Risk factors of PPH**

Risk factors	Number	P value
APH	23	0.01
PIH	12	
Atonicity	4	
Retained placenta	12	
Prolonged labour	13	
Infection	4	

Table III shows that risk factors found to be APH in 23, PIH in 12, atonicity in 4, retained placenta in 12, prolonged labour in 13 and infection in 4 cases. The difference was significant ($P < 0.05$).

DISCUSSION

The mortalities due to post-partum hemorrhage represents only cases which were registered for hospitalized delivery and the hidden or submerged portion of the iceberg which represents the overall mortality which are leading cause of maternal deaths is the target for policy makers.^{7,8} Post-partum hemorrhage reported as the most common direct cause of maternal deaths, although majority of pregnant mothers having hospitalized deliveries or home based deliveries by the help of skilled birth attendants, hence along with that there is essential need of active

management of the third stage of labour in all the cases.⁹ The present study was conducted to determine cases of post-partum hemorrhage (PPH).

In present study, age group 20-30 years had 38, 30-40 years had 18 and >40 years had 12 cases. Shaih et al¹⁰ enrolled 200 cases who had vaginal delivery with blood loss of 500 ml or more and cases who had caesarean section with blood loss of 1000 ml or more. The most common risk factor for the post-partum hemorrhage was the atonicity of the uterus which was seen in 168 (84%) of the total pregnant women. PIH was seen in 74 (37%) pregnant women followed by APH which was seen in 45 (22.5%) pregnant women. Prolonged labour was accounts for 28 (14%) cases of PPH and retained placental products accounts for 17 (8.5%) cases of PPH. Large baby induced PPH was seen in 14 (7%) pregnant women and Genital tract

Injuries accounts for 13 (6.5%) cases of PPH. PPH due to ruptured uterus was seen in 9 (4.5%) pregnant women and multi parity accounts for 9 (4.5%) cases of PPH. Infections were accounts for 5 (2.5%) cases of PPH and Uterine Inversion accounts for 2 (1%) cases of PPH.

We found that mode of delivery was vaginal in 42, LSCS in 26, gravida was primi in 46, multigravida in 22. Complications found to be anemia in 24, DIC in 11 and others in 4 cases. We found that risk factors found to be APH in 23, PIH in 12, atonicity in 4, retained placenta in 12, prolonged labour in 13 and infection in 4 cases. The most effective strategy to prevent postpartum hemorrhage is active management of the third stage of labor (AMTSL). AMTSL also reduces the risk of a postpartum maternal hemoglobin level lower than 9 g per dL (90 g per L) and the need for manual removal of the placenta. Components of this practice include administering oxytocin (Pitocin) with or soon after the delivery of the anterior shoulder; controlled cord traction (Brandt-Andrews maneuver) to deliver the placenta; and uterine massage after delivery of the placenta. Placental delivery can be achieved using the Brandt-Andrews maneuver, in which firm traction on the umbilical cord is applied with one hand while the other applies suprapubic counterpressure.¹¹

Devi et al¹² in their study one-hundred six women were identified with MT over the 10-year period. The MT percentage was stable between the first 5-year group (2006–2010) and the second 5-year group (2011–2015) (2.5% vs. 2.7%, $\chi^2 = 154.85$, $P = 0.25$). Although uterine atony remained the main cause of MT, there was a rising trend for placental abnormalities (especially placenta accreta) in the second 5-year group compared with the first 5-year group (34% vs. 23%, $\chi^2 = 188.26$, $P = 0.03$). Twenty-four (23%) women underwent hysterectomy, and among all the causes of PPH, placenta accreta had the highest hysterectomy rate of 70% (17/24). No maternal death was observed.

CONCLUSION

Authors found that most common risk factors for PPH was APH, PIH and prolonged labour.

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