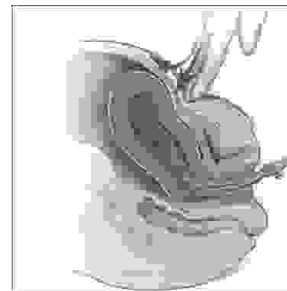


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# RISK FACTORS FOR PRIMARY POSTPARTUM HEMORRHAGE

**DR. BUSHRA SHER ZAMAN**  
**MBBS, MCPS, FCPS**

Assistant Professor of Obst. & Gyna.  
B. V. H /Q. A. M. C  
Bahawalpur.

**DR. SAMINA BADAR**

**MBBS, MCPS, FCPS, PGD (Nutrition),**  
Associate Professor of Community Medicine  
B. V. H /Q. A. M. C  
Bahawalpur.

**DR. MUHAMMAD SHER-UZ-ZAMAN**  
**MBBS, FCPS**

Senior Registrar of General Surgery,  
B. V. H /Q. A. M. C  
Bahawalpur.

**Dr. Muhammad Tariq**  
**MBBS, FCPS-1**

Postgraduate Resident in General Surgery Department  
B. V. H /Q. A. M. C  
Bahawalpur.

**ABSTRACT... Objectives:** To describe the associated risk factor for primary Postpartum Hemorrhage (PPH) and its severity with increasing parity and duration of labour. **Design:** It was a descriptive study. **Place and duration of study:** The Department of Obstetrics & Gynecology (Unit II) of Bahawal Victoria Hospital, Bahawalpur from January 2004 to December 2004. **Patient and method:** Fifty patients with primary postpartum hemorrhage were included in this study. Data was collected from the patients through a structured proforma. The variable studied were parity, duration of labour and risk factors for primary PPH. The results were statistically analyzed, chi-square test was applied to find out the significance of parity and duration of labour and their relationship with severity of PPH. Simple percentages were used to find associated risk factor for primary PPH. **Results:** The frequency of primary PPH in primary para was 24% (12 patients) and in multi para was 76%(38 patients). Severity of PPH increased with increasing parity ( $P<.05$ ). After merging the variable of parity severity of PPH increased in patients with prolonged labour in normally delivered patients ( $P<.05$ ). As for as risk factors are concerned 60% had uterine atony while 16% got cervical tear and the same number had retained placenta, 8% had preneal tear, Uterine inversion was seen in 6%, 4% presented with polyhydrominos, same with placenta previa type-1. 4% had vaginal laceration, 2% had DIC and 2% had abruptio placenta. **Conclusion:** The result of the study revealed a number of associated risk factors for primary PPH and proved the relationship of its severity with increasing parity and duration of labour. Duration of labour had a significant relationship with PPH even in Primipara.

**Key words:** Postpartum Hemorrhages, Risk factors, Multipara.

## INTRODUCTION

Postpartum Hemorrhage, excessive bleeding from genital tract after delivery of child is divided into primary PPH, which is a blood loss >500ml within first 24 hours after child birth and secondary postpartum hemorrhage which is excessive loss at any time after 1<sup>st</sup> day to 42 days of puerperium. Postpartum Hemorrhage is a major cause of maternal morbidity and mortality both in industrialized<sup>1</sup> and non industrialized countries<sup>2,3</sup>.

There are two major categories of PPH.

- 1 Atonic – 90%<sup>4,5,6</sup>.
- 2 Traumatic 10% due to damage to genital tract<sup>7</sup>.

Atonic type hemorrhage is common in a uterus that is over stretched by multiple fetuses, polyhydramnios, or a big baby or one with multiple fibroids, induced or augmented labour especially when becomes prolonged is a clear association. Trauma and retained placenta, placenta previa and coagulopathies are rare causes<sup>4</sup>. There may be a combination of more than one factor in one patient.

Postpartum hemorrhage is an acute life threatening condition, immediate management is life saving. Medical treatment with uterotonic and surgical correction of bleeding, replacement of plasma component to reverse coagulopathy and red cell to maintain tissue oxygenation are the basic aims of management<sup>8</sup>. The objective of this study was to describe the associated risk factors with primary postpartum hemorrhage and assess its severity with change in parity, duration of labour etc.

## MATERIAL AND METHODS

This study was conducted in Unit-II of Obst. & Gynae Department of Bahawal Victoria Hospital, Bahawalpur from January 2004 to December 2004, on an average 1500 deliveries/year occurs in this unit.

Total of 50 patients went into primary postpartum hemorrhage after vaginal delivery throughout this period. The data was collected on pre-designed questionnaires regarding their parity, duration of labour and severity of

postpartum hemorrhage. The results obtained were statistically analyzed and chi-square test was used to find out the significance. Data was presented in the form of tables for parity, duration of labour and risk factors.

## OPERATIONAL DEFINITION

### Mild Postpartum Hemorrhages:

When blood loss is 500ml to 700ml.

### Moderate Postpartum Hemorrhages:

When blood loss is 700ml to 1000ml.

### Sever Postpartum Hemorrhages:

When blood loss is more than 1000ml.

## RESULTS

A total of 50 patients with postpartum hemorrhage were studied. The frequency of postpartum hemorrhage primary para was 24%(12) and in multipara 76%(38) Table I. Severity of postpartum hemorrhage was divided into 3 categories i.e. Mild, Moderate and Severe. Severity of postpartum hemorrhage increased with increasing parity ( $P < .05$ ) Table II. After merging the variable of parity severity of postpartum hemorrhage increased in patients with prolonged labour in normally delivered patients ( $P < .05$ ), Table III.

	No. of pts	%age
Primipara	12	24%
Multipara	38	76%
Total	50	100%

	Mild	Moderate	Severe	Total
Primipara	7(14%)	1(2%)	4(8%)	12(24%)
Multipara	9(18%)	21(42%)	8(16%)	38(76%)
Total	16(32%)	22(44%)	12(24%)	50(100%)

$P < .05$  Significant.

**Table-III. Duration of labour and severity of pph after merger of parity in normally delivered patients**

	Mild	Moderate	Severe	Total
Normal	11(28%)	11(28%)	1(3%)	23(59%)
Prolonged	2(5%)	8(21%)	6(15%)	16(41%)
Total	13(33%)	19(49%)	7(18%)	39*(100%)

*P* < .05, \* 11 patients had gone under C-Section

**Table IV. Associated factors of postpartum hemorrhage**

	Primary (n=12)%	Multi (n=38) %	Total (n=50) %
Atony	4(33%)	2(68%)	30(60%)
Cervical tear	1(12%)	7(18.5%)	8(16%)
Retained placenta	4(33.3%)	4(10.5%)	8(16%)
Polyhydramnios	-	2(5.25%)	2(4%)
Abruptio placenta	-	1(2.6%)	1(2%)
Placenta previa	2(16.7%)	-	2(4%)
Uterine inversion	3(25%)	-	3(6%)
Perineal tear	1(12%)	3(7.8%)	4(8%)
D/C	-	1(2.6%)	1(2%)
Vaginal laceration	1(12%)	1(2.6%)	2(4%)

*Multiple responses were present.*

When associated factors of postpartum hemorrhage were considered one patient had more than one factor so multiple response was considered. The most frequent association was found to be with atony of uterus 60%, while 16% had cervical tear and 16% had retained placenta, 8% had perineal tear, 6% had uterine inversion, 4% were having polyhydramnios, 4% with placenta previa and same with vaginal laceration. 2% had abruptio placenta and DIC (Table IV).

## DISCUSSION

Postpartum hemorrhage remained an important cause for maternal morbidity and mortality both in industrialized and non-industrialized countries<sup>9</sup>. It contributed to 4-11% of maternal mortality<sup>1,2</sup>.

In Saudi Arabia, South Africa, China and Turkey the leading cause of maternal mortality remained primary postpartum hemorrhage and accounts for 25-43% of all maternal death<sup>10,11,12</sup>.

This study was carried out in view, that associated factors with primary postpartum hemorrhage and its severity with increasing parity & duration of labour be assessed. So that maternal morbidity and mortality due to it could be reduced. 1500 vaginal deliveries were undertaken in the unit during the period of study. 50 patients went into primary postpartum hemorrhage. A large proportion of the patients (76%) were multipara and it was seen that severity of postpartum hemorrhage increased with increasing parity. This was comparable with studies done in Saudi Arabia<sup>13,14,15</sup>. Table I.

The incidence and severity of postpartum hemorrhage increased as the duration of labour increased both in primis and multipara. In this study 15% of patients with prolonged labour had severe postpartum hemorrhage, while only 3% of patients with normal duration of labour had postpartum hemorrhage. This goes with results of a study published in southern journal<sup>16</sup> Table III.

Identified risk factors for PPH in the study were uterine atony 60% (a major contributing risk factor). As for as trauma to genital tract was concerned 16%, 8% & 4%, patients had cervical tear, perineal tear and vaginal laceration respectively, while retained placenta was seen in 16% of patients. It correlates with the findings of others<sup>4,5,6</sup>. Acute inversion of Uterus was observed in 6%, 4% had type-I placenta previa, similar percentage for PPH was also contributed by polyhydramnios. This association was also seen in a study<sup>15</sup> (Table-IV).

Coagulopathy is a rare cause for PPH, only 2% had DIC

& similar results were also seen due to abruptio placenta, it correlates with the finding of a study<sup>4</sup>.

## CONCLUSION

The results of this study revealed a number of potential risk factors for postpartum hemorrhage. Efforts to reduce the incidence of postpartum hemorrhage should not only be directed at proper management of labour but also training of health care worker at early referral of patients with prolonged labour. Our findings confirm the importance of previously recognized factors.

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