

Secondary Postpartum Hemorrhage Following Cesarean Section

Bul-Bul S¹, Susan ZS², Jahan R³, Nayeem A⁴, Rahman F⁵, Zakaria RE⁶, Rahman S⁷

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Abstract

Background: Complications of pregnancy and childbirth have always been one of the leading causes of death and disability among women of reproductive age in developing countries. Globally, postpartum haemorrhage is the single most important cause of maternal death, accounting for about 25% of the total and claiming an estimated 1,50,000 lives annually. Among the postpartum hemorrhage, the primary postpartum hemorrhage is more prevalent, but sufferings from secondary postpartum hemorrhage have been emerging. With the rising trend of cesarean section rate, the incidence of secondary postpartum hemorrhage is also rising.

Objective: The objectives of this study is to evaluate secondary postpartum hemorrhage cases following cesarean section and vaginal delivery with the aim of reducing the maternal mortality at child bearing age.

Methods: This is a cross sectional observational study in the department of Obstetrics and Gynaecology, DMCH, by purposive sampling method. Total 100 cases of secondary PPH were observed during 1st January 2013 to 31 December 2013.

Result: In this study, among the cases 67% were following cesarean section and 33% were following vaginal delivery, mean age of the patients were 29 year, parity ranges from 1 to 5. Regarding the outcome of secondary PPH, severe anaemia, anaemic heartfailure, renal failure and DIC were common in cesarean sections along with hazards of massive blood transfusion and jaundice. 7 patients were died in post cesarean cases and 2 died in post vaginal delivery cases. Causes of death were due to hemorrhagic shock & septicemia.

Conclusion: In this is study, the rate of secondary PPH is 67% following cesarean section which is very much alarming. The outcome of secondary PPH following cesarean section is worse than vaginal delivery.

Key words: Pregnancy, childbirth, postpartum, hemorrhage, delivery, reproductive Severe, acute, maternal, morbidity, tertiary care hospital.

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Introduction

Secondary PPH is defined as excessive vaginal bleeding from 24 hours after delivery upto 6 weeks postpartum.⁴ Unlike primary PPH, there is no clear definition for the

quantity of blood loss and this can vary from increased lochia to massive haemorrhage. The diagnosis is therefore subjective which may account for the variation in reported incidence.

Aims and objectives:

General objective:

To evaluate the secondary PPH .

Specific objectives :

To observe the rate of secondary PPH.

To explore the risk factors association for developing secondary PPH.

To determine the complications of secondary PPH.

To evaluate the management.

To determine the case fatality.

To compare the outcome of secondary PPH following cesarean section and vaginal delivery.

To formulate the recommendation for reduction of complications.

1. Dr. Surayea Bul Bul, Junior Consultant (Obs & Gynae), Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.
2. Dr. Zobaida Sultana Susan, Junior Consultant, (Obs & Gynae), Shaheed Suhrawardy Medical College and Hospital, Dhaka
3. Dr. Raunak Jahan, Junior Consultant (Obs & Gynae), Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.
4. Dr. Abu Nayeem, Assistant Professor, Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.
5. Dr. Farzana Rahman, Junior Consultant (Obs & Gynae), Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.
6. Dr. Rooh-e-Zakaria, Assistant Professor, (Obs & Gynae), Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.
7. Dr. Sumana Rahman, Junior Consultant (Obst. & Gynae), Govt. Employees' Hospital, Dhaka

Correspondence to: Dr. Surayea Bul Bul, Junior Consultant (Obs & Gynae), Shaheed Suhrawardy Medical College Hospital, Sher-e-Bangla Nagar, Dhaka.

Methodology : Selection criteria:

Inclusion criteria:

Patients with secondary PPH following cesarean section and vaginal delivery.

Exclusion criteria:

Primary PPH

Data collection tool: by structural data collection form.

Data collection technique: from patient and hospital records.

Statistical analysis: risk factors have been analysed by logistic regression model. Statistical analysis has been made by SPSS for windows version 13.0. 95% confidence

limit has been considered. Probability value 0.05 has been considered as the level of significance.

Results:

Table 1

Incidence of secondary PPH following CS and vaginal delivery

Total no of population	100	%	95% CI
Following CS	67	67	58-76%
Following NVD	33	33	24-42%

Table-II

Comparison of outcome of secondary PPH following CS and vaginal delivery

Outcome	Following CS	%	Following VD	%
Severe anaemia	48	71.64	28	84.85
Anaemic heart failure	7	10.45	2	6.06
DIC	2	2.98	0	0
Massive blood transfusion hazard	1	1.49	1	3.03
Renal failure	3	4.48	0	0
Jaundice	1	1.49	1	3.03
Death	7	10.44	2	6.06

Table-III

Causes of secondary PPH (n=100)

Cause	Total no	Following cs	Following vaginal delivery
Retained placental bits	38	20(52.63%)	18(47.37%)
Sub involution	20	14(70%)	6(30%)
Infection	42	33(78.60%)	9(21.40%)

Table-IV

Case fatality due to secondary PPH following CS and vaginal delivery

Cause of death	No of death (cs)	No of death (vd)	Time interval between cs and death	Time interval between vd and death
Haemorrhagic shock	3	1	4days	3days
Septicemia with haemorrhage	1	1	7days	4days
Internal haemorrhage	3		4days	7days

Relaparotomy was needed in all this cases(n=9)

Discussion:

This study was conducted in DMCH to evaluate the secondary PPH cases following cesarean section and vaginal delivery. The study period was 12 months, starting from January 2010 to December 2010. Among them 67% was delivered by cesarean section and 33% was by vaginal delivery. In DMCH, facilities for emergency cesarean section is available round the clock and patients came here for treatment and complications. So, the incidence of complicated patients in this hospital is high. In DMCH, in 12 months period, total admitted cases of PPH following vaginal delivery were 616, among them primary PPH was 74.35% and secondary PPH was 25.65%. Secondary PPH following vaginal delivery were 29.75% but following cesarean section were 70.25%. So it is evident that secondary PPH was more common following cesarean section.

In this study, secondary PPH following cesarean section was 67% and following vaginal delivery was 33%. This findings were consistent with a similar study done by Rouf S et al, 2007 at DMCH⁵ where 45.80% relaparotomy was done in secondary PPH cases. The age range of patients was from 22 to 38 year with the mean age of 29 year. Parity ranges from 1-5. Among the study population, 95% were housewives and 5% were working ladies. 80% belonged to low socio-economic condition, 55% had no antenatal check up, 70% had previous 1 cesarean section, 6% had 2 cesarean sections. Relative risk of developing secondary PPH was more when repeat cesarean section was done. In this study, 68% patient had no previous surgery, of them, 33% had vaginal delivery and 35% had cesarean section delivery. 22% of cases, primary operation was done at DMCH, 22% cesarean section was done in Dhaka city, in 23% cases, operation was done at hospital outside Dhaka city, therefore 45% patients were referred to DMCH, due to development of secondary PPH following cesarean section. As a tertiary care hospital, this scenario was quite normal.

The outcome of secondary PPH following cesarean section and vaginal delivery of this study were remarkable. Severe anaemia following cesarean section was observed in 71.64% while in case of vaginal delivery it was 84.85%. Anaemic heart failure in post cesarean cases

was 10.45% and it was 6.06% in post vaginal delivery cases. Renal failure and DIC occurred in 2.98% and 4.48% cases respectively, of secondary PPH in cesarean section. None of them were reported in cases of vaginal delivery. In post cesarean section cases, 7 patients died and in post vaginal delivery, 2 patients died.

The case fatality due to secondary PPH following cesarean section was more than vaginal delivery. Out of 9 deaths, 7 were secondary PPH following cesarean section. Maximum number of death was 33.33%, was due to hemorrhagic

shock and it occurred between 1-4 days following cesarean cases. Other cases were septicemia with hemorrhage and internal hemorrhage with coagulation failure. Maternal mortality was quite high in patients who required relaparotomy. In African study⁶, it was 9.1% and Indian study⁷ 6% patient required admission in ICU and 12% patient required massive blood transfusion more than 10 units.

Conclusion:

This study provides a profile of secondary PPH following cesarean section and vaginal delivery and their association in a tertiary teaching hospital of the capital city of Bangladesh. Although the cesarean section delivery can be a life saving operation, serious complications could arise following operation and mandates patient to return to the theatre. In this study, the rate of secondary PPH in 67% following cesarean section is very much alarming. The risk association for secondary PPH is - post cesarean pregnancy, obstructed labour, placenta previa, gestational hypertension, retained placental bits, sub involution. The outcome is alarming enough to make us think about this burning issue. Even after proper management within a short period of time, there is case fatality which should make us concerned. Definitely the outcome of secondary PPH following cesarean sections is worse than that of vaginal delivery.

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