

## Secondary Post Partum Hemorrhage: Prevalence, Morbidity and Management Pattern in Dhaka Medical College

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### Abstract

**Background:** The secondary postpartum hemorrhage occur in 1% of woman and is associated with primary PPH and retained placenta and may result significant maternal morbidity. **Objective:** To determine predisposing factor and usual management pattern of Secondary PPH. **Methods:** A descriptive cross sectional study was carried out among secondary PPH patients admitted in the Obstetrics and gynaecology department of Dhaka Medical College Hospital during September 2011 to February 2012. A total 100 patients were taken as sample by non probability purposive sampling technique. **Result:** Secondary PPH was more common in multiparous woman 75(75%) and lower in primigravida 25(25%) **Conclusion:** Routine Ante Natal Care motivation for hospital delivery and active management of 3<sup>rd</sup> stage of labour with aseptic precaution may reduce secondary PPH as well as maternal morbidity and mortality.

**Keywords:** Post Partum Hemorrhage (PPH), Morbidity, Retained Placenta.

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## INTRODUCTION

Secondary PPH occurs in just under 1% of women and is association with primary PPH and retained placenta and may result in significant maternal morbidity [1]. This problem deserves more attention that it has received in recent years. Secondary PPH has not attracted much attention in recent years but with the introduction of clinical governance, audit and standard setting, information about this condition is now required to enable obstetric units to assess this aspect of maternity care. Women presenting with secondary PPH usually do so during the second post partum week, with the next largest proportion during the 3<sup>rd</sup> week. By this time, most women have been discharged from hospital after vaginal and abdominal delivery [2].

The management of women with secondary PPH remains unclear. The administration of ergometrine with or without oxytocin remains the mainstay of initial treatment. Prostaglandin has been advocated, but have not been promoted since there is

evidence as yet to indicate an obvious advantages. Antibiotics are commonly given to treat super imposed infection, thought to precipitate infection. The decision to subject the woman to surgical evacuation is often difficult to make. Some have advocated on ultrasound examination of the uterine cavity to identify retained placental tissue while other have found it unhelpful. Uterine curettage in this situation is acknowledged to have therapeutic benefit, although product of conception are often not identified. It usually presents as abnormally heavy bleeding (with or without multiple blood clots) being passed later than 24 hours after the birth and up until 6 week after the birth. A heavy blood loss would generally involve large gushes of blood, soaking pads in less than 30 minutes, either continually or 'on and off over a several hours and / or passing large blood clots [3]. A secondary PPH is much less common than heavy bleeding soon after the birth only occurring in less than 1% of all birth. If parts of the placenta remain in the uterus, it can slowly breaks down over time and cause a uterine infection. The presence of foreign body in the uterus often triggers a physical

response by the woman's body to start bleeding more heavily [5, 6].

## MATERIALS AND METHODS

**Study Design:** Descriptive cross sectional study.

**Place of study/study setting:** Indoor, Obstetric and Gynaecology, Department, Dhaka Medical College Hospital.

**Period of study:** September 01, 2011 to February 29, 2012

### Sampling Technique

All the patients with secondary PPH admitted in the department of Obstetrics and Gynecology in DMCH during study period were taken purposively and were interviewed after taking informed written consent. A questionnaire was used. A total 100 cases of secondary PPH were interviewed.

## SELECTION CRITERIA

### Inclusion criteria

- All the patients of Secondary PPH admitted in DMH in Obstetrics and Gynaecology indoor.

### Exclusion criteria

- Patients unwillingness/inability to give informed consent.

The aims and objectives of the study along with procedure, risks and benefits of this study explained to the patient in easily understandable local language and then informed verbal consent was taken from each patient. It assured that all informed and records were kept confidential.

### Methods of data processing and statistical analysis

After collection of data, these were checked, verified and edited for consistency and reduction of error and transferred to a suitably designed master sheet for processing and subsequent analysis. The data were processed manually as well as with the help of SPSS version 12.0 under the supervision and guidance of the dissertation guide.

## LIMITATIONS

Sample size was 100 and it was purposive sampling for the convenience of the study.

As study place (DMCH) is a referral institution of tertiary level, this study is encountered only the referred cases of secondary PPH. Those secondary PPH cases with less severity were kept and treated by the other health care facilities.

## RESULTS

Hundred cases of secondary PPH admitted in Dhaka Medical College Hospital from September 2011 to February 2012 were included in this study. Majority of my study population were in 28-38yr age group (Table-1).

The study also shows (Table- 2) Secondary PPH was maximum among the multiparous women (75%) and comparatively less among the primi (25%).

Among total cases of Secondary PPH spontaneous vaginal deliveries (Table-3) were 65%, assisted vaginal deliveries were 3% and cesarean section were 32%.

Regarding gestational age (Table-4) of the study subjects Secondary PPH were highest among 37-40 weeks of gestational age (55%) and lowest among 28-32 weeks (4%).

Secondary PPH was maximum (Table-5) among spontaneous delivery of placenta (94%) and less in manual removal of placenta (6%).

Among 100 cases 56 (56%) had home delivery and 44 (44%) had hospital delivery (Table-6).

Status of anaemia (Table-7) which was clinically assessed and 48% was mildly anemic, moderately anaemic 44% and severely anaemic was 8% cases.

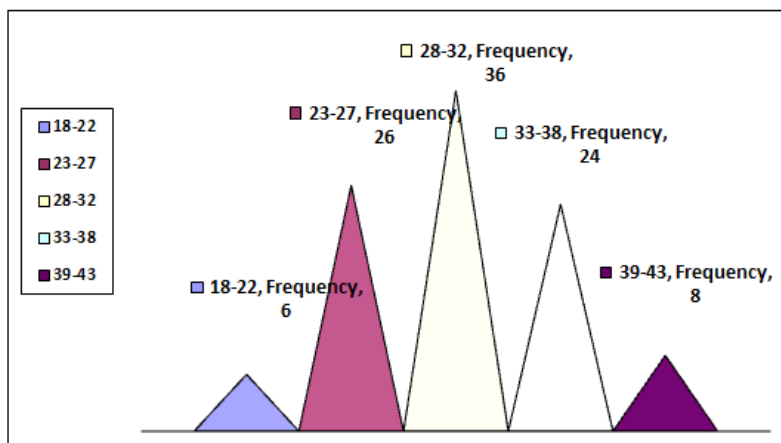
Secondary PPH was found in both booked and non-booked cases. Among the cases (Table-8) 63 (63%) were booked cases but most of them were in irregular ANC and 37 (37%) were non-booked cases.

Among the study population causes of secondary PPH (Table-9) was sepsis in 67% cases, retained bits of placenta 19%, trauma (injury) 11%, corner bleeding from previous uterine scar following caesarean section was 3%.

Regarding management (Table-10) of Secondary PPH cases 79 (79%) cases were managed conservatively with triple antibiotic, uterotonic drug like oxytocin, Ergometrine. Misoprostol, 10 (10%) cases required check curettage of retained bits of placental tissue and membrane. Only one patient needed intrauterine balloon catheterization along with antibiotic and uterotonic drugs. It was a case of primary PPH at first and managed accordingly, then again referred to DMCH as she developed secondary PPH. Trauma in the genital tract were managed by repair of tear 9%. One case (1%) required hysterectomy.

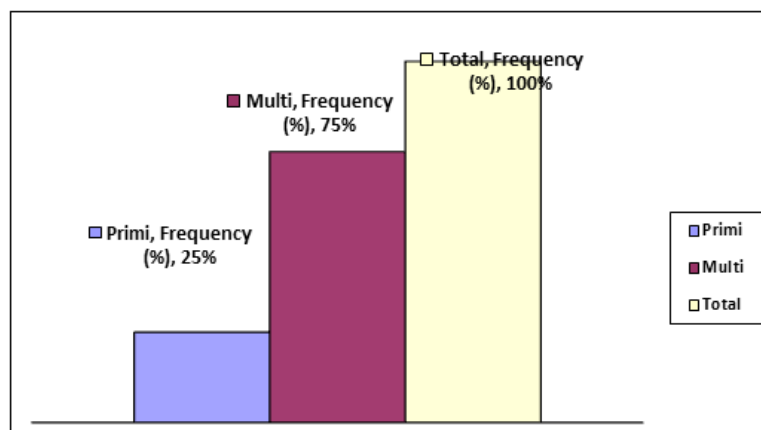
**Table 1: Distribution of the study subject by Age**

Age ( in years	Frequency	Percentage
18-22	6	6%
23-27	26	26%
28-32	36	36%
33-38	24	24%
39-43	8	8%
Total	100	100%



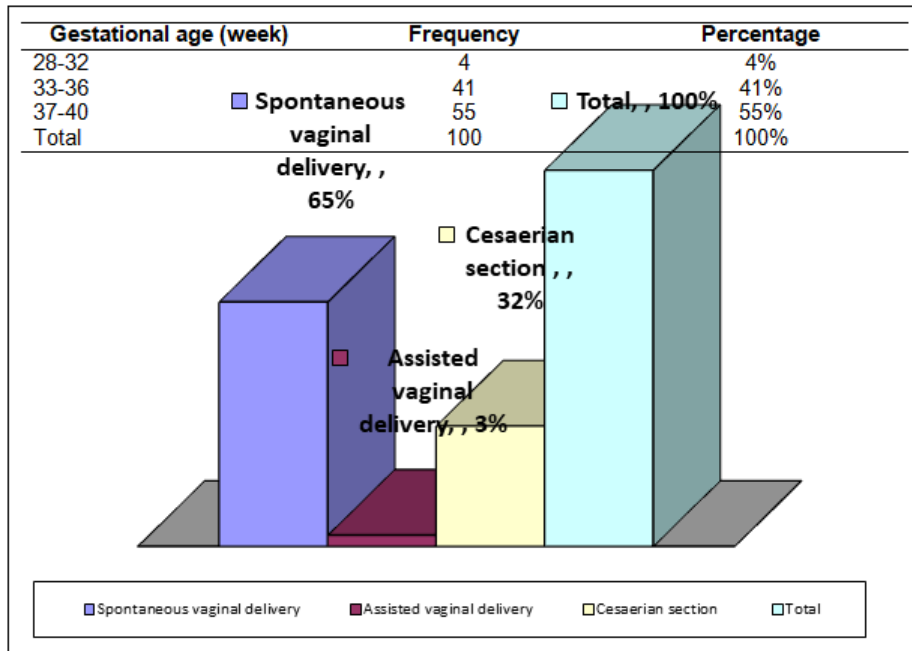
**Table 2: Distribution of parity**

Parity	Frequency	Percentage
Primi	25	25%
Multi	75	75%
Total	100	100%



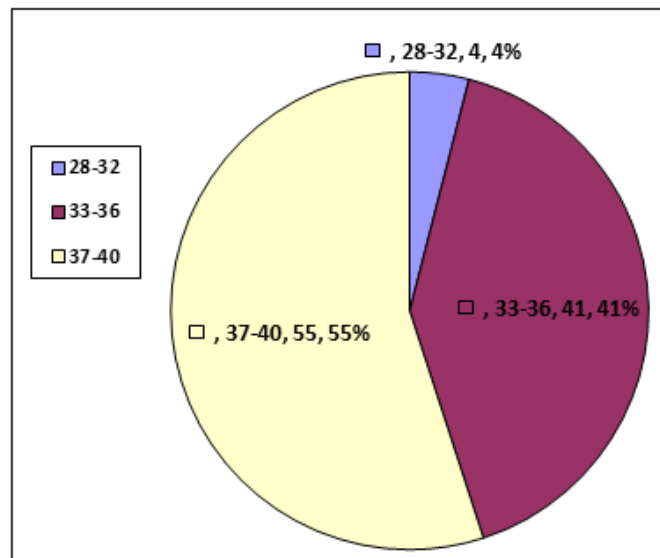
**Table 3: Mode of delivery**

Mode of delivery	Frequency	Percentage
Spontaneous vaginal delivery	65	65%
Assisted vaginal delivery	3	3%
Cesaerian section	32	32%
Total	100	100%



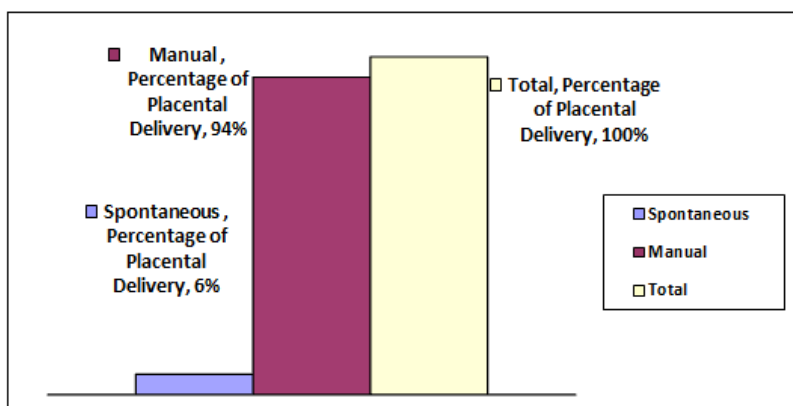
**Table 4: Gestational at the time of delivery**

Gestational age (week)	Frequency	Percentage
28-32	4	4%
33-36	41	41%
37-40	55	55%
Total	100	100%



**Table 5: Mode of placental delivery**

Mode of placental delivery	Frequency	Percentage
Spontaneous	6	6%
Manual	94	94%
Total	100	100%



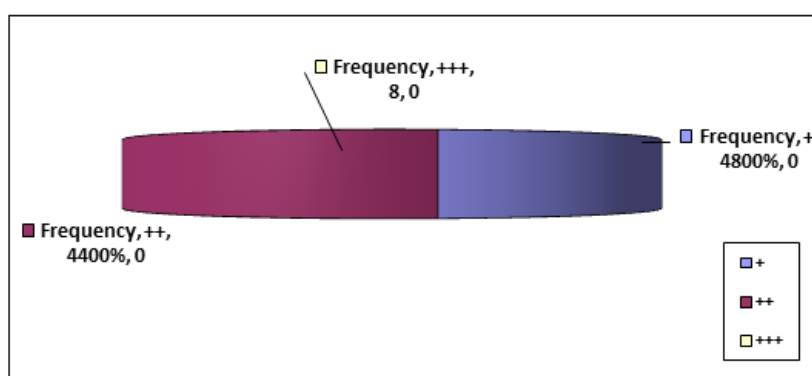
**Table 6: Place of delivery**

Place of delivery	Frequency	Percentage
Home	56	56%
Hospital	44	44%
Total	100	100%



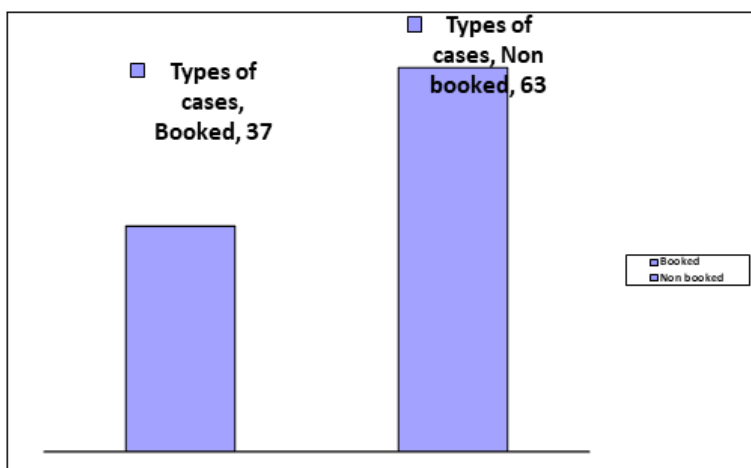
**Table 7: Status of Anaemia (clinical assessment)**

Status of Anaemia	Frequency	Percentage
+	48	48%
++	44	44%
+++	8	8%
Total	100	100%



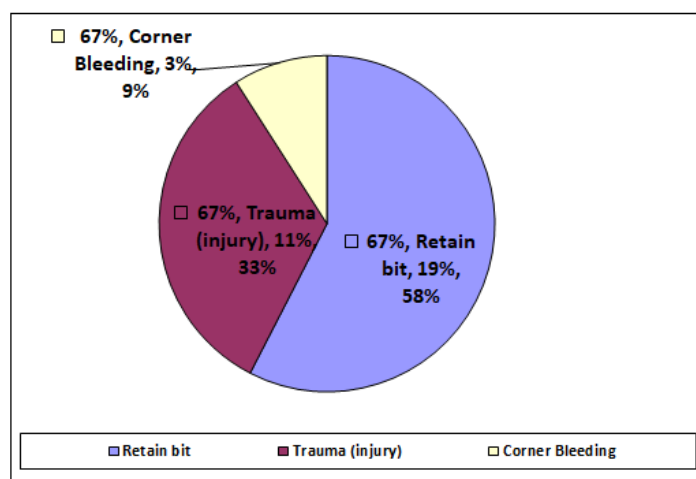
**Table 8: Distribution of study Subjects by booked or non-booked cases**

Type of cases	Frequency	Percentage
Booked cases	37	37%
Non-booked cases	63	63%
Total	100	100%



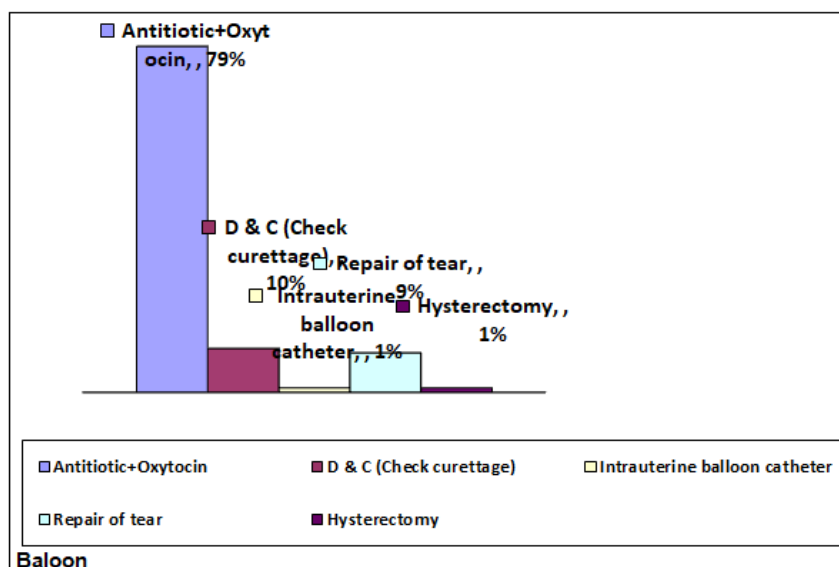
**Table 9: Cases of secondary PPH**

Cases	Frequency	Percentage
Sepsis	67	67%
Retained bits of placenta	19	19%
Trauma (injury)	11	11%
Corner bleeding	3	3%
Total	100	100%



**Table 10: Management of secondary PPH**

Management by	Frequency	Percentage
Antitiotic+Oxytocin	79	79%
D & C (Check curettage)	10	10%
Intrauterine balloon catheter	1	1%
Repair of tear	9	9%
Hysterectomy	1	1%
Total	100	100%



## DISCUSSION

The study was conducted at Dhaka Medical college Hospital, Department of obstetrics & Gynecology from September 2011 to February 2012. Like other studies the prevalence of Secondary PPH was also common in the tertiary centre like DMCH.

In the study most of the cases were at 28-38 years of age group. The prevalence of Secondary PPH is higher among the multiparous like other studies<sup>9</sup>. The prevalence of secondary PPH is also higher in spontaneous vaginal delivery which were conducted at home and the caesarean section cases were done at private clinics and ultimately referred to DMCH. Most of secondary PPH cases belonged to gestational age between 37-40 which is about 36%.

Like other studies cases of secondary PPH more common in manual removal of placenta than spontaneous delivery. This may be due to retained bits of placenta.

Secondary PPH is more common among the cases who were delivered at home than at hospitals. The reason most probably is active management of third stage of labor being practiced in our hospitals both private and Govt [8].

Status of anaemia of secondary PPH cases mildly anaemic was 48%, moderate 44% and severely anaemic 8%. Hb% of the study population was found low during ante natal check up.

In this study percentage of Secondary PPH was more in Un-booked cases (63%) than booked cases (37%). It is noteworthy that all the subjects made irregular ANC, some cases mentioned only one antenatal visit to the health personnel for ante natal check up. Regular antenatal check up may help them to reduce morbidity. A pregnant woman receiving at least

four visit is regarded as booked case.

Sepsis is the main cause of secondary PPH. It is due to many patients undergoing home delivery without septic precaution. Almost all patients with secondary PPH underwent USG and found retained bits of placenta (19%) and sepsis (67%). This study shows retained bits of placenta followed by sepsis seems to be the culprit of secondary PPH [1, 2, 8, 9]. Here the study population with sepsis were presented with raised temperature, foul smelling discharge, subinvolution of uterus.

The management of secondary PPH is obstetrics & Gynecology department, 79% cases managed conservatively with combined antibiotic and uterotonics, check curettage done in 10%. The findings were same in the study conducted at Dhulikhel Hospital, Nepal [12]. The main outcome measured used for the analysis were amount of blood loss, cause of PPH and treatment methods. 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 secondary PPH. PPH was found more in home deliveries, un-booked cases and in multiparas. As an etiology, 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 in the 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.

The administration of ergometrine with or without oxytocin remains the mainstay of initial treatment. Antibiotic are commonly given to treat super imposed infection, thought to precipitate infection. The decision to subject the women to surgical evacuation is often difficult to make. Some have advocated on ultrasound examination of the uterine cavity to identify

retained placental tissue while other have found it unhelpful. Uterine curettage in this situation is acknowledged to have therapeutic benefit, although product are often not identified.

## CONCLUSION

Secondary PPH make an important contribution to maternal morbidity. They remain a leading cause of maternal morbidity in many countries in the world. Morbidity varies with cause of secondary PPH. Screening of high risk cases, routine ANC, motivation for hospital delivery and active management of 3rd stage of labor, conduction of labor with aseptic precaution will reduce secondary PPH and maternal morbidity. To draw significant conclusion it is recommended that all postpartum cases should be examined with scrutiny for overt or established secondary PPH.

## RECOMMENDATION

Further study with a large sample size may contribute to find out the predisposing factors and will help to reduce morbidity of secondary PPH.

With referral of high risk cases to tertiary centres, routine ANC for motivation of hospital delivery and or active management of third stage of labour, conduction of labour with aseptic precaution will reduce secondary PPH and maternal morbidity. Attendance of skilled birth attendants during delivery and timely referral to tertiary centre are also recommended.

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