Section: Obstetrics and Gymecology

Original Research Article

PREVALENCE OF POST PARTUM HAEMORRHAGE IN MAHARASHTRA POPULATION

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Corresponding Author:
Dr. Supriya Yashwant Jagdale,
Email: jagdalesupriya19@gmail.com

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Supriya Yashwant Jagdale[1], Meghana Lalit Datar[2], Renu Thosar[2]

[1]Associate Professor, Department of Obstetrics and Gymecology, Symbiosis Medical College for Women and Symbiosis University Hospital and Research Centre Lavale, Pune Maharashtra, India.
[2]Assistant Professor, Department of Obstetrics and Gymecology, Symbiosis Medical College for Women and Symbiosis University Hospital and Research Centre Lavale, Pune Maharashtra, India.

Abstract

Background: Postpartum hemorrhage is one of the major cause of maternal mortality and morbidity in both virginal delivery and caesarean sections worldwide. **Materials and Methods:** 480 full-term pregnant women with PPH were studied. Apart from biochemical and hematological studies, IV fluid, use of oxytocin, epidosin, PV exam, episitomy, blood transfusion, and manual removal of the placenta were also tried. Clinical manifestations were noted and treated accordingly. **Result:** 177 (36.8%) were prima gravida, 303 (63.1%) were multigravida, and in the hemodynamic study, 303 (63.1%) were stable; un-stable was noted. In the clinical manifestation study, the highest number uterine, atony 195 (40.6%), followed by 65 (13.5%) abruption, 63 (13.1%) genital trama, 48 (10%) retained placenta, 32 (6.6%) failure of coagulation were studied, 192 (40%) caesarean section, 114 (23.7%) vaginal delivery, and 65 (13.5%) induction. Out of 480 PPH, 49 (10.2%) were normal and the and the remaining had morbidity. **Conclusion:** PPH is the leading cause of mortality, and morbidity prevention plays a very important role. By identifying the risk factors and etiology of PPH, we can prevent PPH from active management of labor.

INTRODUCTION

Post-partum hemorrhage (PPH) is defined as any blood loss > 500 ml following vaginal delivery and > 1000 ml after caesarean section.[1] The definition varies in various parts of the world and is often based on inaccurate estimates of blood loss.[2] It can also be defined as a fall in hemocrit > 10%. PPH is often classified as primary, occurring within 24 hours of birth, and is a more common form of PPH, defined as bleeding in excess of normal lochio, after for 24 hours and up to six weeks postpartum. In addition, it can also be classified as a third or fourth stage depending on whether it occurs during or after the delivery of the placenta, respectively.

According to WHO estimations, PPH is a leading cause of maternal mortality and morbidity worldwide and is responsible for nearly one-quarter (25%) of all maternal deaths.[3] Half of these total material deaths occur in underdeveloped countries. According to the latest WHO figures, 10.5% of all live births were complicated by PPH, and 13.5% of maternal deaths were reported every year due to PPH.[4] Hence, the risk of women dying due to pregnancy or childbirth in their lifetime has to be prevented by proper preventive measures. Therefore, an attempt is made to evaluate the factors causing PPH.

MATERIALSANDMETHODS

480 (four hundred and eighty) full-term pregnant women admitted to the obstetrics and gynecology department of Symbiosis Medical College Hospital and Research Centre Lavale, Pune, Maharashtra 412115 were studied.

Inclusive Criteria

The patients with secondary and primary PPH were included in the study. After direct visualization of the artery during laparotomy, Those who had blood loss > 1500 ml but were hemodynamically unstable were included in the study.

Exclusion Criteria

The patients had a cardiac or epileptic history, and some patients were on anti-depression therapy. HIV-positive patients were excluded from the study.

Method: A detailed history of each patient was noted, including age and socio-economic status. The obstetric history included the duration of the onset of pain and a history of vaginal leaks or bleeding. Methods of intervention like use of IV fluid, use of oxytocin, epidosin, per-vaginal examination, ARM, any inducing agent installation, episitomy given, any instrumental use, blood transfusion, and manual removal of the placenta were tried and noted.

The duration of the study was from July 2023 to June 2024.

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Statistical Analysis: parity, condition causes of hemorrhage, pregnancy-related variables, and types of labor-related perimorbital conditions were classified by percentage. The statistical analysis was done in 2007 using SPSS software.

RESULTS

[Table 1] Study of parity in PPH patients – 177 (36.8%) were prima gravida, 303 (63%) were multigravida

[Table 2] Study of hemodynamic status in post-partum Haemorrhagic patient 303 (63.1%) were stable, 177 (36.8%) were un-stable hemodynamicity

[Table 3] Clinical manifestation in PPH patients – 48 (10%) had retained placenta, 63 (13.1%) genital tract trauma, 195 (40.6%) had uterine atony, 65 (13.5%) had abruption, 32 (6.6%) coagulation failure.

[Table 4] Types of labours in PPH patients – 114 (23.7%) vaginal delivery, 192 (40%) had caesarean Delivery, 29 (6.04%) has assisted Breech delivery 65 (13.5%). Induction, 48 (10%) prolonged labour, 32 (6.6%) Macrosomia.

[Table 5] Study of perinatal Morbidity in PPH patients – 113 (23.5%) NICU admission, 175 (36.4%) were prematurity, 79 (16.4%) had jaundice, 64 (13.3%) had septicaemia, 49 (10.2%) were normal (No morbidity).

Table 1: Study of parity cases, No of patients: 480.

Sl. No	Details of Parity	No. of Cases	Percentage %
1	Prima gravid	177	36.8
2	Multi gravid	303	63.1

Table 2: Study of Hemodynamic status in post-partum haemorrhage patients, No of patients: 480

Sl. No	Details of Hemodynamicity	No. of case	Percentage
1	Stable	303	63.1
2	Un-stable	177	36.8

Table 3: Clinical Manifestations of post partum Haemorrhage (PPH)

Sl. No	Particulars	No. of cases	Percentage
1	Retained placenta	48	10
2	Genital tract trauma	63	13.1
3	Uterine atony	195	40.6
4	Abruption	65	13.5
5	Congulution failure	32	6.6

Table 4: Types of labours in post-partum haemorrhage (PPH) patients, No of patients: 480

Sl. No	Types of labours	No of cases	Percentage
1	Vaginal Delivery	114	23.7
2	Caesarean Delivery	192	40
3	Assisted Breech Delivery	29	6.04
4	Induction	65	13.3
5	Prolonged labour	48	10
6	Macrosomia	32	6.6

Table 5: Study of perinatal morbidity in PPH patients, No of patients: 480

Sl. No	Perinatal morbidity details	No. of cases	Percentage
1	NICU Admission	113	23.5
2	Prematurity	175	36.4
3	Jaundice	79	16.4
4	Septicaemia	64	13.3
5	Normal (No Morbidity)	49	10.2

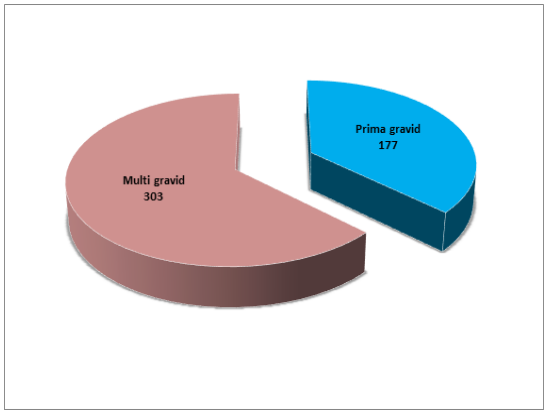

Figure 1: Study of parity cases

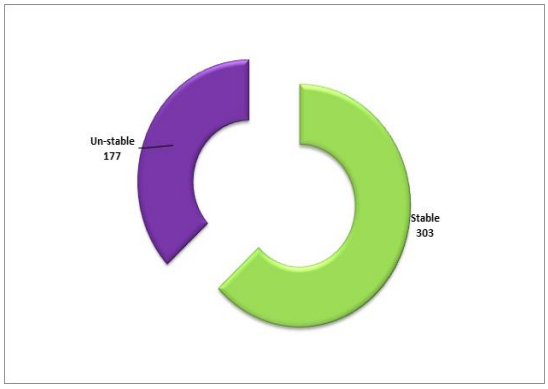

Figure 2: Study of Hemodynamic status in post-partum haemorrhage patients

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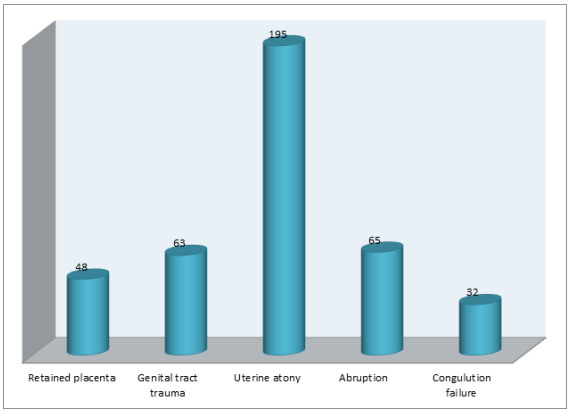

Figure 3: Clinical Manifestations of post-partum Haemorrhage (PPH)

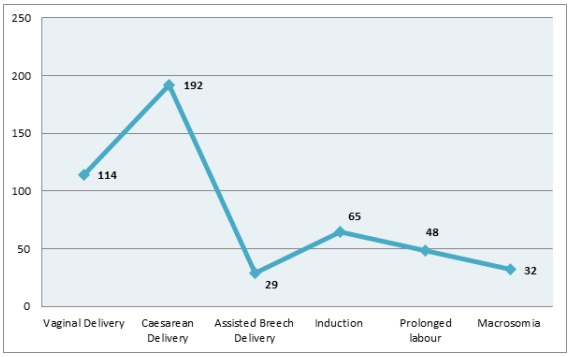

Figure 4: Types of labours in post-partum haemorrhage (PPH) patients

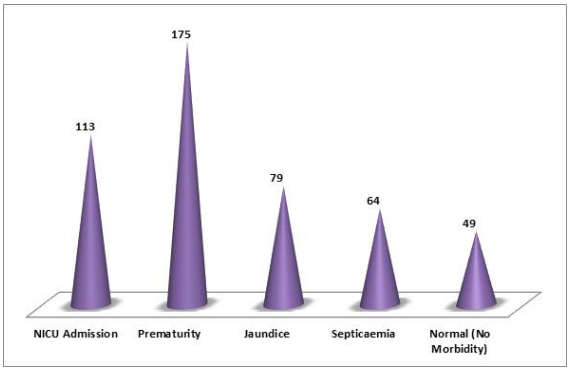

Figure 5: Study of perinatal morbidity in PPH patients.

DISCUSSION

Present study of the prevalence of PPH in the Maharashtra population. 177 (36.8%) prima gravida, 303 (63.1%) multigravida [Table 1]. 303 (63.1%) had stable hemodialysis, and 117 (36.8%) had un-stable hemodialysis [Table 2]. Clinical manifestations included 48 (10%) having retained placenta, 63 (13.1%) having genital tract trauma, 195 (40.6%) having uterine atony, 65 (13.5%) having abruption, and 32 (6.6%) having coagulation failure [Table 3]. Types of labor were: 114 (23.7%) were vaginal, 192 (40%) were caesarean sections, 29 (6.04%) assisted breach delivery, 65 (13.5%) had induction, 48 (10%) had prolonged labor, and 32 (6.6%) had macrosomia [Table 4]. Perinatal morbidities were 113 (23.5%) NICU admissions, 175 (36.4%) were premature, and 79 (16.4%) had jaundice. 64 (13.3%) had septicemia, and 49 (10.2%) were normal (no morbidity) [Table 5]. These findings were more or less in agreement with previous studies.[5-7]

The major causes of PPH are atony of the uterus, trauma, retained placenta, or abnormalities. Most of the cause is uterine atony, which is episodic and unpredictable. Women are known to have risk factors for PPH; appropriate steps for prevention should be taken during antenatal and intrapartum periods to reduce this risk. It was also reported that PPH can also occur with no risk factors.[8]

The important steps in the management of PPH are predicting PPH and assessing blood loss during the third stage of labor. The visual estimation of blood loss after delivery is inaccurate. Weighing of soaked swabs, active periodic estimation, and a written and pictorial guide to aid visual estimation in labor wards may improve the accuracy of the estimation of blood loss.[9] The protocol for the management of major PPH was: Maintain Hb% >8 gm/d1, platelet count > 75X109X1, prothrombin <1.5Xmean control, prothrombin time < 1.5xmean control, fibrinogen > 1.0 gm/1, high concentration of O2 (151/minute), to maintain pulse rate, BP, oxygen saturation using oximetre. ECG, Foleys catheter to measure urinary output, fluid balance chart, blood transfusion in major PPH. These may be one or more causes of PPH, tone, tissue, trauma, or thrombin, but the most common cause of PPH is uterine atony. If the pharmacological method fails to control bleeding in cases of atonic PPH, exclude other or additional causes by undertaking a clinical examination in the theater, and the next intervention, the mechanical method of balloon catheter tethered, is instituted before considering a surgical procedure.[10] Moreover Radiological management for embolism of the uterine artery in atonic and traumatic PPH. Hysterectomy was avoided in major PPH by arterial embolism to maintain fertility.[10] Surgical procedures include uterine compression sutures, vascular ligations, and post-partum hysterectomy. Recombinant activated factor VII and the role of tranexamic acid also played a significant role in control PPH.

CONCLUSION

The present study of PPH in the Maharashtra population will be quite useful for obstetricians and gynecologists, physicians, radiologists, and pathologists to treat PPH efficiently to prevent high-risk factors and active management labor. It requires a multidisciplinary approach, which is essential in severe hemorrhage. The availability of blood and blood products is very essential. It is a matter of thought that in some patients, PPH can also occur with no risk factors. This study demands further hematological (angiological), genetic, nutritional,

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histopathological, and hormonal studies because the exact pathogenesis of PPH is still unclear.

Limitation of study: Owing to the tertiary location of the research centre, the small number of patients, and the lack of the latest technique, we have limited findings and results.

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