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Original Research Article

A clinical study on management of major primary postpartum haemorrhage at tertiary care centre

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ABSTRACT

Background: Postpartum Haemorrhage remains one of the leading causes of maternal morbidity and mortality worldwide. It is estimated that about one quarter to one half of preventable maternal deaths are because of haemorrhage. It is defined by the royal college of obstetrician and gynaecologist as blood loss from the genital tract within the first 24 hours after birth of at least 500ml (minor) and at least 1000ml (major) causes of post-partum haemorrhage (PPH) are commonly ascribed to the four Ts (tone, trauma, tissue, 4 thrombin).
Methods: This study aimed to assess the clinical practices used by our hospital in managing major PPH. Observational study of the management of PPH over a period of 2 months from March 2023 to April 2023 was carried out. Criteria examined: history of previous PPH causes of PPH, use of oxytocin in the first stage for more than 6 hours. Role of blood transfusion, presence of senior faculty, and type of uterotonics used.
Results: There were 50 patients diagnosed with major PPH among which 26 had caesarean delivery. Two major risk factors were analysed, one was Use of oxytocin in first stage for more than 6 hours and history of previous PPH. Uterine atony was commonest cause in 64% of cases.
Conclusions: Uterine atony is responsible for most of cases. Early, aggressive, and coordinated intervention by health care professionals is critical in minimizing blood loss to ensure optimal clinical outcomes in management of women with major PPH.

Keywords: Oxytocin use, Post partum haemorrhage, Uterine atony

INTRODUCTION

Postpartum haemorrhage (PPH) remains one of the leading causes of maternal morbidity and mortality worldwide.[1] It is estimated that about one quarter to one half of preventable maternal deaths are because of haemorrhage.[2] It is defined by the royal college of obstetrician and gynaecologist (RCOG) as blood loss from the genital tract within the first 24 hours after birth of at least 500ml (minor) and at least 1000ml (major). Most common type of obstetrics haemorrhage is postpartum haemorrhage, mainly primary type.[3] Haemorrhage is the fifth or sixth leading cause of death in developing countries. It accounts for the majority of cases that result in severe maternal or near miss obstetrics morbidity. Haemorrhage is the leading cause of death in developing countries.[4-6] Early transfusion of blood and blood products prevent from developing coagulopathy.[7] Causes of post-partum haemorrhage (PPH) are commonly ascribed to the four Ts (tone, trauma, tissue, thrombin). Uterine atony is responsible for most of cases.[8] The frequency and impact of severe haemorrhage can be effectively reduced by reducing avoidable risk factors,

especially those related to obstetric interventions as increased CS rate and induction and augmentation of labour with injudicious use of uterotonics. Other risk factors not amenable to change such as age, ethnic origin, and pre-existing medical diseases or bleeding disorders can be minimized by extra vigilance and planned conjoined management.[3]

Aim of study were to know the current clinical practice in management of major primary postpartum haemorrhage at tertiary care centre and to evaluate the causes of major primary postpartum haemorrhage.

METHODS

This was observational study conducted in the Pannadhay Mahila Hospital, Udaipur from March 2023 to April 2023.

Inclusion criteria

Inclusion criteria were the pregnant lady delivered at the pannadhay mahilla hospital Udaipur and patient had major primary post-partum haemorrhage (more than 1000ml blood loss).

Exclusion criteria

Exclusion criteria were the referred patient in view of PPH, secondary PPH, and any bleeding which already started antenally like antepartum haemorrhage.

The following criteria were examined: history of previous PPH causes of PPH, use of oxytocin in the first stage for more than 6 hours. Role of blood transfusion, presence of senior faculty, and type of uterotonics used.

Statistical analysis

Data were analysed by using basic descriptive statistics tool.

RESULTS

A total of 50 patients were diagnosed with PPH. Out off 50, 26 were caesarean section. 20 were spontaneous vaginal delivery and 4 were instrumental delivery (Figure 1).

Amount of blood loss

Blood loss of more than 1000ml as major PPH. was considered 50 patients had blood loss of more than a litre. There was 72% had blood loss between 1000 to 1500ml (36/50), 18% had blood loss between 1500 to 2000ml (9/50) and 10% had blood loss of more than 2000ml (5/50). Most of the patient had mild PPH which is more the one litre blood loss. Only 10 percent had severe post-partum haemorrhage which is more than two litre blood losss (Figure 2).

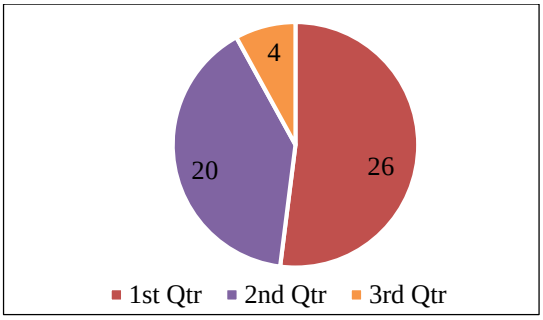

Figure 1: Mode of delivery.

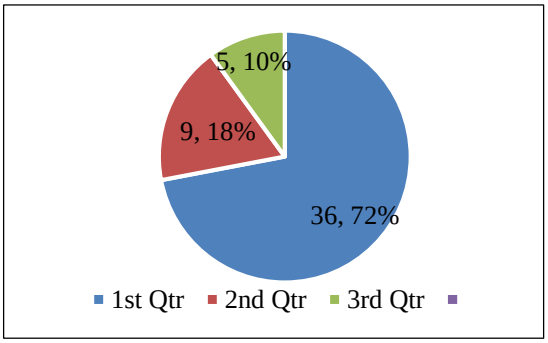

Figure 2: Amount of blood loss.

Risk factors associated

Two major risk factors were analysed: Use of oxytocin in first stage for more than 6 hours 18% (9/50), history of previous PPH 14% (7/50) others 68% (34/50).

Causes of major PPH

Uterine atony was commonest cause in 64% of cases (32/50), retained products of conception (RPOC) 8% (4/50), angle extensions during CS 6% (3/50), trauma 14% (7/50), and combined factors 8% (4/50). Most common cause associated with post-partum haemorrhage was uterine atony (64%) followed by retained production pf conception and trauma. 8 % patient had both uterine atony and trauma so included as combined factor (Figure 3).

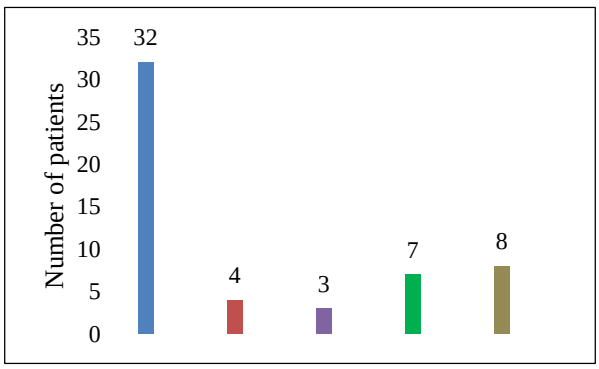

Figure 3: Causes of major PPH.

Use of blood transfusion

Nine patients received blood transfusion after PPH making 18%. Most of the severe PPH patient needed the blood transfusion. Reasons for getting blood transfusion were Hb less 7g/dl. Acute loss on chronic anemia, syncope.

Uterotonics used in management of PPH

Oxytocin bolus 100%, oxytocin infusion 100%, misoprostol tablet 100%, tranexamic acid 8%, syntometrine 12%, and Carboprost 10%. As with protocol oxytocin bolus intramuscularly 10 unit and oxytocin infusion (10 unit) slowly and per rectal misoprostol 800mg was given to all the patients. 12% patient needed the syntometrine and 10% needed the carboprost intramuscular injection.

DISCUSSION

The major cause associated to primary postpartum haemorrhage was uterine atony (64 %) which was comparable to previous studies Nyflot et al (60%), Tondge et al (69%), Grotegut et al (50%).[9-11]

In a study conducted by Ashraf et al, uterine atony was found in 34% of cases.[12] In international studies uterine atony was the most common cause of PPH, ranging from 50% to 76% of cases.[13-14] The second most common cause of primary PPH is traumatic (20%). International studies also mention a frequency ranging from 9% to 20% of cases of traumatic lesions as the cause of PPH.[14-15]

The anemic patient needed blood transfusion in our study which was comparable to Bazirete et al (5.6%).[16]

We found association of use of oxytocin augmentation with PPH which was supported by Stine et al, Belghiti et al (73%).[17,18]

There are a few limitations of our study like small sample size and duration of the study was less. The study might not be a real representative of the catchment area since women who received delivery services other than this hospital were not included. Further study with large number and longer duration is needed.

CONCLUSION

This study indicates that the management of women with major PPH in Pannadhay Mahila Hospital Udaipur is consistent with the current clinical practice. Uterine atony is responsible for most of cases. Early, aggressive, and coordinated intervention by health care professionals is critical in minimizing blood loss to ensure optimal clinical outcomes in management of women with major PPH.

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