



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

ROLE OF UTERINE PACKING IN THE MANAGEMENT OF POSTPARTUM HEMORRHAGE

KEY WORDS: Postpartum hemorrhage, Uterine packing, Uterotonic drugs.

Dr. Peenal P. Patel*	3 rd year Obgy Resident, Smt. SCL Municipal Hospital, Ahmedabad. *Corresponding Author
Dr. Vandana K. Saini	Associate Professor, Smt. SCL Municipal Hospital, Ahmedabad.
Dr. Heenal R. vaghela	2 nd year Obgy Resident, Smt. SCL Municipal Hospital, Ahmedabad.

ABSTRACT
Objective: The objective of the present study is to evaluate the safety and effectiveness of uterine packing in treatment of postpartum hemorrhage, refractory to medical treatment.
Material and Methods: The prospective analysis of 50 cases of PPH, treated with uterine packing as a conservative therapeutic option, is done in department of Obstetric and Gynecology, SCL Municipal Hospital, Ahmedabad.
Result: There were 50 cases of uterovaginal packing as a treatment of PPH. Uterine atony was the commonest cause of PPH. Uterovaginal packing was successful in 47 (94%) cases.
Conclusion: Uterine packing is a safe, quick and effective, conservative procedure for the control of postpartum hemorrhage, which shortens the hospital stay and avoids the need of invasive procedures.

INTRODUCTION

Postpartum hemorrhage (PPH) is commonly defined as blood loss of 500ml or more within 24 hours after birth. It affects approximately 2% of all women who give birth.^[1]

In WHO systematic analysis of causes of maternal death, hemorrhage was the leading direct cause of maternal death worldwide, representing 27.1% of maternal deaths. More than two thirds of reported hemorrhage deaths were classified as postpartum hemorrhage.^[1]

PPH is a significant contributor to severe maternal morbidity and long term disability as well as to a number of other severe maternal conditions generally associated with more substantial blood loss, including shock and organ dysfunction.

Common causes of PPH include uterine atony, bleeding from placental implantation site and trauma to genital tracts and adjacent structures, placenta accreta, uterine inversion, and abnormalities of the haemostatic system^[3]. The most common cause of early PPH is uterine atony in 80-85% cases.

There are various methods to control bleeding like uterotonic drugs, uterine tamponade, compression sutures, arterial embolisation, surgical devascularisation and lastly hysterectomy^[2]. Among these methods, uterovaginal packing is easy and safe procedure where uterotonic drugs fail. The aim of this study is to assess safety and efficacy of uterovaginal packing in the management of PPH so as to decrease the morbidity and increase the likelihood of uterine preservation.

MATERIAL AND METHODS

This prospective study was carried out at Department of Obstetrics & Gynecology, Shardaben General Hospital, Saraspur, Ahmedabad during a period of 2 years from July 2018 to July 2020. The study investigated the effectiveness of intrauterine packing in the management of PPH, in 50 cases of postpartum hemorrhage refractory to medical treatment. All women with traumatic PPH and women with secondary PPH were excluded. Cases were reviewed and parameters were collected and analyzed with regard to maternal socio-demographic characteristics, Obstetric history, gestational age, laboratory test parameters, presence of risk factors, mode of delivery, indication of caesarean section and causes of PPH. Main outcomes including the success rate, need for additional procedures, maternal mortality and morbidity in

terms of postpartum pyrexia and concealed hemorrhage was also analyzed.

Each of the delivery was conducted with active management of third stage of labor. A step wise approach in the management of PPH was followed according to the hospital protocol and as soon as atonic PPH was diagnosed, uterine massage started and uterotonic agents, namely injection oxytocin, injection carboprost and tab misoprostol per rectally were used in recommended doses for management of PPH. Maternal resuscitation was started while these procedures are being administered. In cases refractory to uterotonic agents, intrauterine packing was done using 8-10 meters gauze roll soaked in povidone iodine solution, with the help of uterine packing forceps, starting from the fundus up to the cervix. It was done vaginally in cases of vaginal delivery or through the caesarean incision in cases of caesarean section. Blood and blood products were transfused as per the individual requirements. After the procedure all the patients were managed in intensive care unit, with hourly monitoring of vital signs, fluid input/ output, fundal height and vaginal blood loss. Oxytocin infusion was continued to keep the uterus contracted over 12-24 hours. Antibiotic coverage was given for 7 days.

Clinical success was defined as control of bleeding without further intervention. Analysis was done.

RESULTS:

A total of 50 cases were identified in which intrauterine packing was done to control PPH.

Table No.1 –Mode of delivery

Mode of delivery	Number of cases	Percentage
Vaginal delivery	08	16
LSCS	42	84
Total	50	100

Intrauterine packing was used to control bleeding in 8(16%) cases delivered vaginally and in 42(84%) cases following caesarean section.

Table No.2 – Causes of PPH

Causes	Number of cases	Percentage
Atonicity of uterus	33	66
Bleeding from placental implantation site in placenta previa	13	26

Uterine inversion	1	2
Deranged coagulation profile	3	6
Total	50	100

Most common cause of PPH was atonic uterus in 66% cases, followed by bleeding from placental implantation site in placenta previa in 26% cases.

Table No.3- Outcome of procedure

Outcome	Number	Percentage
Success	47	94
Failure	3	6
Total	50	100

Uterine packing was effective in 94% cases, whereas 6% patients underwent hysterectomy.

Table No.4- Maternal morbidity

Complication	Number of cases	Percentage
Febrile morbidity	3	6
Cesarean section wound sepsis	3	6
Difficulty in pack removal	4	8

The length of time for which the uterine pack was kept, varied from 24-48 hours. Antibiotics were administered for 7 days. In present study there was no maternal deaths.

DISCUSSION

Postpartum hemorrhage is an obstetric emergency. In present study, the intrauterine packing was successful in controlling PPH in (94%) women, refractory to treatment by uterotonic drugs. The efficacy of uterine packing depends upon its proper application of its employment early in the course of postpartum hemorrhage. In present study, intrauterine packing was done to control bleeding in 8 (16%) cases delivered vaginally and in 42 (84%) cases following caesarean section. As reported in other studies, it is an effective method in controlling hemorrhage in women delivered either vaginally or by caesarean section^[6].

Most common indication of uterine packing was PPH due to atonic uterus in 66% cases^[10]. PPH may be aggravated by preexisting anemia and in such instances, the loss of a smaller volume of blood may still result in adverse clinical sequel. In many women, uterine atony can at least be anticipated in advance of removal of pack within 24-36 hours are important measures to minimize infection. No serious complication was reported. It has been suggested that intrauterine packing is helpful in managing PPH in resource poor settings^[7,8].

Uterine tamponade by intrauterine packing is a less invasive procedure which is simple, does not require major surgery, can be done within minutes, and will often immediately reduce or stop the bleeding^[4,5]. Thus it may avoid the need for laparotomy and hysterectomy and associated morbidities.

In present study, there were no maternal deaths. Most deaths resulting from PPH occur during the first 24 hours after birth^[9]. The majority of these could be avoided through the use of prophylactic uterotonics during the third stage of labor and by timely and appropriate management.

An important factor in the maternal mortality resulting from PPH is late recognition of the severity of the bleeding with a resulting delay in blood replacement. Unfortunately, when the woman with PPH decompensate, the opportunity for therapeutic intervention is limited and coagulopathy, renal failure and death are difficult to avoid.

CONCLUSION

Uterine packing is useful, conservative and minimally invasive technique in controlling PPH due to uterine atony and placental implantation site bleeding. It is a simple, fast and cost effective procedure and a reasonable alternative to

further surgical intervention, in the treatment of postpartum hemorrhage, especially when other options are unavailable.

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