



Original Article

Role of intrauterine balloon tamponade in controlling massive primary post partum haemorrhage

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Abstract

Postpartum haemorrhage (PPH) Remains a significant complication of child birth worldwide. The most common cause of PPH is uterine atony. Recently, uterine tamponade using intrauterine condom appearsto be an effective tools in the management of uncontrolled primary PPH. Objectives of our studywas to see the effectiveness of large volume fluid filled condom catheter in the management of primary PPH. Methods: a condom was inserted in the uterus by means of a size 16 rubber catheter and inflated with 250 to 300ml normal saline until the bleeding was controlled. The condom was kept in situ for 24 to 48 hours. Results: Out of 53 cases, PPH was controlled in 52 cases. One patient died as the patient was eclamptic & develped disseminated intravascular coagulation (DIC). No patient required surgical intervention. Conclusion: fluid filled intrauterine condom is an effective method in the management of primary PPH when usual measures & drugs fail to control PPH.

Keywords

Postpartum haemorrhage, Balloon tamponade, Condom, Rubber catheter.

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Introduction

Obstetric hemorrhage is a significant contributor to maternal morbidity and mortality & accounts for half of the maternal death world wide¹. In a review of maternal mortality, primary PPH accounted for 28% of all deaths in 11 population based studies from eight developing countries². Guideline for the management of primary PPH involves a stepwise approach which includes oxytocin, ergometrine, misoprostol, prostaglandin F2 α . If these attempt prove to be unsuccessful and the woman is not already having caesarean section, a laparotomy is considered. During this time, various surgical interventions may be used, like internal Iliac artery ligation, B-Lynch suture, peripartum hysterectomy etc³. Sterile gauze was

invariably used for uterine packing but problems encountered in achieving a good packing were concealed bleeding, uterine trauma and infection.

Currently, the intrauterine balloon is believed to act by exerting inward to outward pressure that is greater than the systemic arterial pressure to prevent continual bleeding⁴. Many of these balloons have previously been used to control haemorrhage at the other anatomical sites, including the urinary bladder and oesophagus, as well as to control primary PPH from vaginal laceration^{5,6}.

Condoms (latex) or plastic sheaths are used mainly as contraceptive devices and barriers against STDs. Recently obstetricians have given condoms

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a new image. A condom inflated with isotonic solution can used to create the tamponade⁷.

In Bangladesh, the method was first used in Dhaka Medical College Hospital to manage intractable primary PPH due to uterine atonicity or placenta accreta. This study was done in light of two other studies that reported on the use of Sengstaken Blakemore tube and the Rush urologic hydrostatic balloon catheter for controlling primary PPH.

Material and Methods

This prospective, observational study was done in the department of Obs&Gynae, Rajshahi medical College Hospital, Rajshahi from August 2012 to September 2013. Total 53 patients who developed massive primary PPH & not controlled by usual measures & drugs were included in this study.

Description of the technique

- Patient was placed in dorsal/Lithotomy position.
- A Foley catheter was inserted in the urinary bladder for urine indwelling drainage.

- Cervix was exposed by sponge holding forceps.
- A condom was inserted in the uterus by means of a size 16 rubber catheter & inflated with 250 to 300 ml of normal saline until the bleeding was controlled.
- The proximal end of the catheter was folded & tied with thread so that the saline solution could not escape.
- A roller gauze was packed in the vagina to keep the inflated condom in place.
- Condom was kept for 24-48 hours depending on the severity of blood loss.
- Maintenance of contraction was ensured by continuous infusion of oxytocin.
- Prophylactic antibiotic was administered in every case.

Table: Out come of use of condom tamponade in primary PPH control (n=53)

Type of PPH	No.	Percentage
Primary	53	100%
Secondary	0	0%

Causes of PPH	No.	Percentage
Atonicity	51	96.23%
Placenta previa& morbid adhesion	2	3.77%

Mode of delivery	No.	Percentage
Spontaneous vaginal delivery	47	88.68%
Instrumental delivery	2	3.77%
LUCS	4	7.55%

Duration of retention of condom catheter	No.	Percentage
24 hours	32	60.38%
24-48 hours	21	39.62%

Outcome	No.	Percentage
PPH controlled	52	98.11%
PPH uncontrolled	1	1.89%

Discussion

To arrest bleeding, balloon tamponade procedure has been accepted in medicine over 50 years, with the Sengstaken – Blakemore tube having an established place in the management of bleeding oesophageal varices & balloon tamponade following prostatectomy & massive bladder hemorrhage.^{10,11} Various studies showed that balloon tamponade is not only effective in controlling primary PPH from atonic uterus but also from placental bed or vaginal laceration¹². Once in situ, only bleeding will be halted, but also any consumptive coagulopathy can be open sinuses of the uterus, bleeding controlled immediately¹⁵. However, although they are very effective for controlling primary PPH, are very expensive & not available in our country. On the other hand, condoms & plain rubber catheters are cheap & safely applied by the primary health workers before patient referral. They often eliminate the need for surgical intervention without compromising maternal lives. Therefore, balloon catheters should be readily available on all labour wards & should be part of all protocols in the management of primary PPH.

Conclusion

We would suggest uterine tamponade using fluid filled condom as the first step for controlling PPH after exploration of the uterus prior to performing laparotomy. It is quick, safe & effective method & results can be known within minutes.

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