

Control of Postpartum and Post Abortal Haemorrhage with Uterine Packing

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Abstract

Objective: To determine safety and effectiveness of uterine packing to stop hemorrhage in postpartum and post abortal cases.

Methods: Patients who delivered either vaginally or via Caesarian section who developed primary post partum haemorrhage and post abortal patients developing primary post partum haemorrhage refractory to conventional medical treatment, were included in the study. Packing was done using 8-10 meters sterilized gauze from the fundus to cervix and was left for 12-24 hours or removed earlier in cases of failure to control hemorrhage. Morbidity and effectiveness was assessed.

Results: Intractable primary hemorrhage was encountered in 20 patients of whom 2 had bleeding after caesarian section, 14 after vaginal delivery and 4 patients had post abortal haemorrhage. Uterine atony was the commonest cause. Failure of packing to control haemorrhage was seen in 3 cases. It was successful in 17 cases.

Conclusion: Whether used early or late in the management of post partum haemorrhage, uterine packing is a safe, quick and effective procedure (JPMA 55:369;2005).

Introduction

Postpartum haemorrhage is one of the leading 5 causes of maternal deaths in both the developed and the developing countries.¹ Loss up to 1000 ml is well tolerated by a healthy pregnant woman partly due to physiological increase in the plasma volume and red cell mass during pregnancy. Nevertheless hypovolemic shock is the major cause of maternal mortality. Effective management requires team work, coordination, speed and adequate facilities for life saving, access to blood and blood products as well as laboratory back up.²

In the developing world risk of maternal death from post partum haemorrhage is 1 in 1000 deliveries. In UK the risk is 1 in 100000.³ Management of intractable post partum haemorrhage, refractory to oxytocics and prostaglandins requires prompt action. Most common cause is due to atony of the uterus. Haemorrhage can occur despite active management of the 3rd stage of labour.⁴ Recently the focus has been on decreasing the morbidity associated with obstetric and gynaecological haemorrhage and the aim is to decrease the need for laparotomy and increase the likelihood of uterine preservation.⁵

For most of the cases tamponade may be required (uterine packing or balloon catheter). Resuscitation may be inadequate because of underestimation of blood loss and misleading maternal response. All members of the obstetric team should know how to insert a uterine packing because timing is of essence.

Uterine packing may be a reasonable alternative to further surgical intervention in patients with intractable obstetrical haemorrhage.⁶ It should be considered when

conventional therapy fails to provide relief.⁷

This presentation concerns 20 patients managed with uterine packing post partum and post abortion, failure rate morbidity and mortality.

Patients and Methods

The study was conducted in the department of gynaecology and obstetrics, Dow University of Health Sciences from July 2002 to November 2004.

Patients included in the study were those with intractable postpartum haemorrhage not responding to medical treatment, second trimester post abortal patients with haemorrhage after evacuation not responding to conventional methods and postoperative patients who developed haemorrhage after caesarian section.

Exclusion criteria included cases of ruptured uterus, perineal trauma, cervical trauma and vaginal trauma.

Intrauterine packing was done by using 8-10 meters gauze starting from the fundus with the help of sponge holding forceps up to the cervix. Vagina was also firmly packed to give additional pressure to the uterine packing. Antibiotic coverage was given for 5 days. Uterine packing was removed after 12-24 hours of insertion (or removed earlier in case of failure).

Results

A total of 20 patients were included of whom 14 had haemorrhage after vaginal delivery, 4 had haemorrhage after second trimester abortion and 2 after lower segment caesarian section. Eleven patients (55%) were between the ages of 20-30 years, 4 (20%) between 30-40 years, 3 (15%)

between 15-20 years and 2 patients were more than 40 years age. Uterine atony unresponsive to oxytocics was the commonest cause of post partum haemorrhage, seen in 60% cases (table 2).

Table 1. Relationship of parity.

Parity	Number of Patients	%
Prime	4	20
2-4	10	50
>4	6	30

Average blood loss was 1.5 liters. Packing was successful in 17 (85%) cases whereas 3 patients had failure of uterine packing. Of these, 2 patients underwent postpartum hysterectomy and 1 patient died within 1 hour of admission. She was 10th gravida, delivered at home 3 hours back, brought in a state of shock. Traumatic haemorrhage was excluded. Along with initial resuscitative measures and oxytocics, packing was done. Bleeding could not be stopped and she died within 1 hour of admission.

Table 2. Clinical Diagnosis.

Cause of Haemorrhage	Number of Patients	%
Atony	12	60
Coagulopathy	6	30
Endometritis	2	10

All patients required blood transfusion with 15 requiring 3 pints of blood, 3 patients 5 pints, and 2 patients 6 pints of blood.

Post insertion morbidity included fever more than 100°F in 4 patients and episiotomy wound infection in 2 patients.

Discussion

In our study the main criteria assessed was the success rate, maternal mortality, and morbidity in terms of postpartum pyrexia and concealed haemorrhage. Wittch et al have recommended uterine packing as a pre-surgical management tool when lacerations of lower genital tract, uterine rupture and retained products have been excluded and conventional therapy has failed to control uterine haemorrhage. They described two cases managed successfully with uterine packing.⁷ Our study also included cases of non-traumatic uterine haemorrhage and success rate was 85%.

Historically, many obstetricians frequently described packing of the uterine cavity but the practice fell out of use between 1960s to 1980s. Besides not being physiologic, objections to post partum uterine packing has raised fears of infection and concealed haemorrhage.

A study conducted by Robert et al showed that successful treatment of haemorrhage was clinically evident after procedure was completed, although packing material

became heavily stained with serosanguinous fluid. Fever after uterine packing was minimal and of no clinical significance.⁸ Comparing this with our study as regards post insertion morbidity, besides pyrexia (20%) two patients developed episiotomy wound infection. Concealed haemorrhage was not seen in any of our patients, however there was some soakage of the packing.

Comparing the results of postpartum morbidity, a study by Hsu et al to determine safety and effectiveness of uterine packing for stopping haemorrhage in patients following delivery and pregnancy termination, a total of 9 patients were identified. One patient had failure of packing resulting in postpartum hysterectomy. There was no significant morbidity secondary to packing.⁶ In our study 2 patients had hysterectomy.

Hysterectomy is a radical procedure that causes undesirable side effects of reproductive sterility, secondary amenorrhoea, and physical and psychological trauma. Several authors reported that bilateral uterine artery ligation was as effective a procedure for management of uncontrolled postpartum haemorrhage. Failure occurred in 8% to 20% cases and hysterectomy was required. Stepwise uterine artery devascularization has high success rate and is a safe alternative to hysterectomy.⁹ Successful use of inflated stomach balloon (300 ml) of Sengstaken Blakemore tube has been reported. Several other methods of tamponade have also been tried. Richard Johanson describes an innovative method of tamponade using hydrostatic balloon catheter.¹⁰

Two case reports from Pakistan on uterine packing showed successful management and it was recommended that packing should be practiced at tertiary hospitals if women wishes to preserve fertility.¹¹ B Lynch Brace Suture which is another conservative surgical approach but not in practice. Ashley S Roman in his article of seven ways to control postpartum haemorrhage describes "re-emergence" of uterine packing, which fell out of use largely due to concerns of concealed haemorrhage. He also mentioned that several modifications have allayed these concerns.¹²

Interval for removal of pack has to be individualized according to clinical findings. Pack was removed earliest at 12 hours and maximum at 24 hours in successful cases in our study. Robert C reported earliest removal of pack at 5 hours and latest at 96 hours.⁸

Randomized control trials under ethical approval are required to identify the best way of managing women with intractable haemorrhage unresponsive to conventional medical treatment. Depending on the availability of resources, these conservative methods help lower maternal death rates and minimize hysterectomies. The study concluded that uterine packing is a safe, quick and effective procedure for control of obstetric haemorrhage.

References

1. Mousa HA, Walkinshaws S. Major post partum haemorrhage Curr opin obstet gynecol 2001;595-603.
 2. Hofmeyr GJ, Mohlala BK. Hypovolumic shock Best Pract Res Clin Obstet Gynecol 2001;645-62.
 3. Mousa HA, Walkinshaws S. Major Post Partum Hemorrhage. Curr Opin Obstet Gynecol 2001;13:1-12.
 4. Lokugamage AV, Sullivan KR, Nicolescu I, Tigere P, Oryanganga F, Rafeay EI, et al. A randomized study comparing rectally administered misoprostol verses syntometrine combined with oxytocin infusion for cessation of primary post partum hemorrhage. Acta Obstet Gynaecol Scand 2001;835-9.
 5. Pahlavan P, Nezhat C. Haemorrhage in obstetric and gynecology. Curr Open Obstet Gynaecol 2001;419-24.
 6. HSU S, Rodgers B, Lele A, Yeh J. Use of packing in Obstetric haemorrhage of Uterine Origin J Reprod Med 2003;48:69-71.
 7. Wittich AC, Salminen ER, Hardin EL, Desantis RA. Uterine Packing in Combined Management of Obstetric Hemorrhage. Mill Med 1996;161:180-2.
 8. Maier RC. Control of Post Partum Haemorrhage with Uterine Packing. Am J Obstet Gynaecol 1993;169:317-21.
 9. Salah A, Abd Rabbo. Step Wise Uterine Devascularization Am J Obstet Gynecol 1994;171:694-700.
 10. Johanson R, Manjit MK, Young P. Management of massive post partum Haemorrhage. Br J Obstet Gynecol 2001;108:420-22.
 11. Naqvi S, Makhdoom T. Conservative Management of Primary Post Partum Hemorrhage. JCPSP 2004;14:296-97.
 12. Roman AS, Rebarber A. Seven ways to control post partum haemorrhage Contemporary OB/Gyn Newsline 2003;3:1-14.
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