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Mini Review

Uterine Packing in the Management of Postpartum Hemorrhage: A Mini-Review Article -

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Postpartum Hemorrhage (PPH) can be defined as estimated blood loss of more than 500 ml following vaginal delivery, and more than 1000 ml following cesarean delivery. It can be classified in term of time into primary and secondary, primary when it occurs in the first 24 hours postpartum, secondary when it happens between 24 hours and 6-12 weeks postpartum. Majority of the primary postpartum hemorrhage cases are caused by uterine atony (80% and more). Other possible causes include: genital tract injury, retained placenta, coagulopathy or uterine inversion. When postpartum hemorrhage diagnosed, supportive measures should be initiated to achieve hemostasis, including: intravenous access, fluid replacement, communication with blood bank, anesthesiologist, obstetrician-gynecologist, and nursing. In the management of postpartum hemorrhage, a less-invasive method can be started initially, including uterine massage, repairing tears or lacerations if present or draining a hematoma and packing the vagina, administration of uterotonics or applying different types of tamponade. If all supportive methods failed, a surgical approach should be started without further delay to preserve the patient's life [1].

Uterovaginal packing with gauze is one of the tamponade techniques to control postpartum hemorrhage which is reasonable alternative when other conventional methods failed to control the bleeding [2]. Historically, many obstetricians described uterovaginal packing for the management of postpartum hemorrhage, but this practice fell out of use due to raised concerns of infections and concealed hemorrhage.

It's considered safe, effective, does not require highly technical equipment nor expertise, and it conserve fertility [3]. A retrospective review of post-partum records at University hospital in Augusta, Georgia from 1985 – 1991 was performed by Robert C. Maier, MD [4]. 10 patients with post-partum hemorrhage were managed by uterine packing using Torpin packer, which is an instrument introduced by Dr. Richard Torpin, used to insert 4.5 meter of 10-cm-wide gauze into the endometrial cavity. In one of the 10 cases the Torpin packer failed to function properly, so different measure was taken to manage the post-partum hemorrhage. In the other nine cases, genital laceration was excluded, uterine massage, oxytocin and methergine given before applying uterovaginal packing. In 2 cases, uterine packing failed to control the bleeding, both underwent total abdominal hysterectomy. 4 patients had coagulopathy from the excess bleeding were successfully managed by packing in addition to blood and blood factors administration, one of them was diagnosed as placenta accreta, she had uneventful immediate postpartum period, but underwent curettage 2 months later. All of the 9 cases received broad-spectrum antibiotics during or after the procedure.

Two cases of postpartum hemorrhage managed with uterovaginal packing were reported by Rashmi Bagga et al [5]. The first case presented to the hospital 2-hours post vaginal delivery at another hospital with active bleeding, she was pale (hemoglobin 5.2 g/dL), tachycardic and hypotensive, underwent examination under anesthesia showed partially inverted uterus, initial management with manual repositioning, bimanual compression, oxytocin, ergometrine and prostaglandin failed, uterovaginal packing with 6 units of povidone-iodine soaked rolled gauze knotted end-to-end, 10 cm wide and 4 meter long inserted using forceps. Bleeding stopped and she became vitally stable. Patient received 5 units of blood transfusion and broad-spectrum antibiotics. The pack removed after 36 hours without complications.

The second reported case underwent elective cesarean delivery, placenta found to be adherent and removed partially, patient was readmitted 30 days post-delivery with postpartum hemorrhage and fever, received 4 units blood transfusion, oxytocin and antibiotics. Patient did not improve and referred 10 days later to other hospital with hemoglobin level of 7.3 g/dL and fever. On admission she was vitally stable, abdomen was soft with healed incision, cervix was open with placental tissue protruding into the vagina and active per-vaginal bleeding. Patient underwent examination under anesthesia, 100 gm of placental tissue removed, oxytocin and prostaglandin failed to control the bleeding, uterovaginal packing with 3 units of povidone-iodine soaked rolled gauze inserted, bleeding controlled. Patient received 4 units blood transfusion and started on broad-spectrum antibiotics. Packing removed after 44 hours; patient had good recovery.

A retrospective cohort review covering 7 years from January 2001 – December 2007 of 48 patients out of 83 patients with postpartum hemorrhage due to placenta previa/accreta managed with uterovaginal packing published by Nawal A AlHarbi et al [3]. 45 patients successfully managed with uterine pack using a 10 cm wide and 2-meter-long gauze soaked with normal saline, which was introduced into the lower uterine segment through the cesarean section incision, and its lower end was pulled into the vagina. Another counteract vaginal pack was inserted into the vaginal fornices. Antibiotics given for 5 days, blood and blood products have been transfused, and the pack removed 24 hours post operatively through the vagina. 3 patients needed re-opening and hysterectomy performed. Other patients managed with uterovaginal packing and internal iliac artery ligation. No maternal death was recorded in this series.

CONCLUSION

Uterine packing still an option to control PPH in low-income countries or less equipped hospitals. More studies to be carried out and new obstetricians to be trained for this in case of no other available options.

REFERENCES

1. American College of Obstetricians and Gynecologists. ACOG Practice Bulletin: Clinical Management Guidelines for Obstetrician-Gynecologists Number 76, October 2006: postpartum hemorrhage. Obstet Gynecol. 2006 Oct;108(4):1039-1047. doi: 10.1097/00006250-200610000-00046. PMID: 17012482.
2. Wittich AC, Salminen ER, Hardin EL, Desantis RA. Uterine packing in the combined management of obstetrical hemorrhage. Mil Med. 1996 Mar;161(3):180-182. PMID: 8637653.
3. Al-Harbi NA, Al-Abra ES, Alabbad NS. Utero-vaginal packing. Seven years review in the management of post partum hemorrhage due to placenta previa/accreta at a maternity hospital in Central Saudi Arabia. Saudi Med J. 2009 Feb;30(2):243-246. PMID: 19198714.
4. Maier RC. Control of postpartum hemorrhage with uterine packing. Am J Obstet Gynecol. 1993 Aug;169(2 Pt 1):317-21; discussion 321-323. doi: 10.1016/0002-9378(93)90082-t. PMID: 8362942.
5. Bagga R, Jain V, Kalra J, Chopra S, Gopalan S. Uterovaginal packing with rolled gauze in postpartum hemorrhage. MedGenMed. 2004 Feb 13;6(1):50. PMID: 15208561; PMCID: PMC1140727.

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