Uterine balloon tamponade for the management of postpartum haemorrhage within health systems

Postpartum haemorrhage (PPH) is a devastating but preventable condition that affects mothers and their children around the world. PPH occurs when a woman has serious bleeding after giving birth. When not treated quickly, it can be fatal. Most deaths from PPH could be avoided through active management of the third stage of labour, and prompt and effective application of the first response bundle (use of uterotonics, uterine massage, fluid replacement and tranexamic acid [TXA]).

It is essential that a systematic approach to PPH is followed to provide guidance for all maternal health care professionals faced with PPH. If bleeding persists despite the first response bundle approach, uterine balloon tamponade (UBT) is recommended for the management of persistent PPH.[1-5]

Preventing and treating PPH

As the leading organisation representing specialists in obstetrics and gynaecology globally, the International Federation of Gynecology and Obstetrics (FIGO) draws attention to a range of elements of care that are essential to the prevention and treatment of PPH. These elements include:

- pre-service and in-service training of care providers
- identification and treatment of anaemia in women of childbearing age
- increased availability of contraceptives and family planning services
- improved referral pathways
- development of clinical protocols for the prevention and treatment of PPH.

Management of PPH using UBT

The response to refractory PPH bundle includes compressive measures such as bimanual uterine compression, non-pneumatic anti-shock garments and uterine balloon tamponade. Beyond the application of the first bundle, when considering a UBT health practitioners should be aware of elements of the health system that are essential for the successful management of persistent PPH.

UBT should be utilized within an enabling health system structure that has:

- strong leadership within the emergency care team
- health practitioners who anticipate necessary actions should any one of several possible complications arise
- a clear next level of care to refer to within the regional health system
- competent health care providers who are trained on inserting UBT within an aseptic environment to avoid complications that can arise from misplacement and sepsis.

UBT is a diagnostic and therapeutic tool. If bleeding does not stop after UBT insertion, the aetiology of the haemorrhage should be reconsidered. Perineal, vaginal, cervical and uterine tears should be excluded and the placenta carefully assessed. Blood coagulopathy studies are helpful in identifying disseminated intravascular coagulation.

Networks of care

The women most at risk of death from PPH within a health system are those delivering at lower-level health facilities, where there are no surgical facilities or blood banks, and often no medical doctors. Skilled midwives make enormous contributions at the primary health care (PHC) level. Placement of a UBT at the PHC level can be lifesaving. Even if blood transfusion or surgery are required, a woman is likely to arrive at the referral facility in a more stable condition following placement of a UBT.

Implementation of appropriate technologies at health centre levels requires linkages of skilled birth attendants at the PHC level to consulting staff at a referral hospital. The introduction of continuous dialogue (including by WhatsApp groups etc.), training/supervision, and joint outcomes monitoring and action has been shown to improve maternal and newborn care. WHO plans to release experiences with networks of care in LMICs.[6]

FIGO position on the issue

FIGO agrees with and supports global voices that urge states/countries to strengthen the capacity and resourcing of health care systems and the health workforce, in order to provide the essential services needed to prevent and treat maternal morbidities. These changes must come through increased budget allocations for health, including sexual and reproductive health care services and the deployment and training of midwives, nurses, obstetricians, gynaecologists, doctors, surgeons, anaesthesiologists, and maternal health care professionals (MHCP), in accordance with international medical standards and the holistic integration of social services.

FIGO also agrees with and supports the use of first-line emergency interventions for atonic PPH that include uterine massage, initiation of intravenous access, administration of oxytocin and tranexamic acid, and emptying the uterus and bladder (first response bundle for PPH). If the uterus fails to contract, ergometrine or misoprostol should be administered, and a UBT appropriately placed.

FIGO recommendations

In light of the available evidence and in the context of the necessary enablers outlined above, FIGO recommends:

- use of UBT in refractory PPH. UBT has proven to be an effective non-surgical technique and a cost-effective approach to the treatment of uncontrolled PPH when employed rapidly by a properly trained person, especially in contexts where uterotonics were ineffective or unavailable, or where access to surgery was not possible
- regular training of health care professionals in the method of UBT insertion
- the integration of primary health care facilities into the networks of care associated with regional referral hospitals that have the ability to provide blood transfusion and emergency laparotomy.

FIGO commitments

FIGO commits to:

- supporting member societies and frontline professionals to ensure evidence-based clinical practice advice is shared and disseminated as it emerges
- calling on the global community and national state actors to strengthen health systems to better support professionals in the delivery of quality health services
- working with member societies to strengthen their leadership and advocacy capacity around the effective management of PPH.

References

1. Althabe F, Therrien MNS, Pingray V, et al. Postpartum hemorrhage care bundles to improve adherence to guidelines: A WHO technical consultation. *Int J Gynecol Obstet* 2020;148:290-299.
2. Finlayson K, Vogel JP, Althabe F, Widmer M, Oladapo OT (2021). Healthcare providers experiences of using uterine balloon tamponade (UBT) devices for the treatment of post-partum haemorrhage: A meta-synthesis of qualitative studies. PLoS ONE 16(3):e0248656.
3. Tolosa JE, Bakri YN, Arulkumaran S. Intrauterine balloon tamponade for control of postpartum hemorrhage. [UpToDate website].
4. Ramanathan A, Eckardt MJ, Nelson BD, et al. Safety of a condom uterine balloon tamponade (ESM-UBT) device for uncontrolled primary postpartum hemorrhage among facilities in Kenya and Sierra Leone. BMC Pregnancy Childbirth. 2018;18(1):168.
5. Suarez S, Conde-Agudelo A, Borovac-Pinheiro A, et al. Uterine balloon tamponade for the treatment of postpartum hemorrhage: a systematic review and meta-analysis. Am J Obstet Gynecol. 2020;222(4):293.e1-293.e52.
6. WHO. Recommendations for the prevention and treatment of postpartum hemorrhage. 2012.

Acknowledgements and approval

FIGO acknowledges Dr Carlos Füchtner (Bolivia), Dr Jerker Lijestrand (Sweden), Dr André Lalonde (Canada), Dr Thomas Burke (USA) and Dr Edward Morris (UK) for their work in preparing this statement.

This statement was approved by the Safe Motherhood and Newborn Health Committee, Postpartum Haemorrhage Working Group and FIGO's Board of Trustees.

FIGO Statement

October 2021

Corresponding authors **Dr Jolly Beyeza,** Chair, Postpartum Haemorrhage (PPH) Working Group
Dr Poonam Shivkumar, member, PPH Working Group
Contact via committees@figo.org

About FIGO

FIGO is a professional organisation that brings together more than 130 obstetrical and gynaecological associations from all over the world. FIGO's vision is that women of the world achieve the highest possible standards of physical, mental, reproductive and sexual health and wellbeing throughout their lives. We lead on global programme activities, with a particular focus on sub-Saharan Africa and South East Asia.

FIGO advocates on a global stage, especially in relation to the Sustainable Development Goals (SDGs) pertaining to reproductive, maternal, newborn, child and adolescent health and non-communicable diseases (SDG3). We also work to raise the status of women and enable their active participation to achieve their reproductive and sexual rights, including addressing female-genital mutilation (FGM) and gender-based violence (SDG5).

We also provide education and training for our Member Societies and build capacities of those from low-resource countries through strengthening leadership, good practice and promotion of policy dialogues.

FIGO is in official relations with the World Health Organization and a consultative status with the United Nations.

About the language we use

Within our documents, we often use the terms 'woman', 'girl' and 'women and girls'. We recognise that not all people who require access to gynaecological and obstetric services identify as a woman or girl. All individuals, regardless of gender identity, must be provided with access to appropriate, inclusive and sensitive services and care.

We also use the term 'family'. When we do, we are referring to a recognised group (perhaps joined by blood, marriage, partnership, cohabitation or adoption) that forms an emotional connection and serves as a unit of society.

FIGO acknowledges that some of the language we use is not naturally inclusive. We are undertaking a thorough review of the words and phrases we use to describe people, health, wellbeing and rights, to demonstrate our commitment to developing and delivering inclusive policies, programmes and services.

For enquiries Rob Hucker, Head of Communications and Engagement
communications@figo.org +44 (0) 7383 025 731

Referencing this statement

International Federation of Gynecology and Obstetrics. *FIGO Statement – Use of UBT terine balloon tamponade for the management of postpartum haemorrhage within a health systems*. 2021. Available from: www.figo.org/resources/figo-statements/uterine-balloon-tamponade-management-postpartum-haemorrhage-within-health-systems