WHO recommendation on the use of uterine artery embolization for the treatment of postpartum haemorrhage

21 September 2012

Recommendation

If other measures have failed and if the necessary resources are available, the use of uterine artery embolization is recommended as a treatment for postpartum haemorrhage due to uterine atony.

(Weak recommendation, very-low-quality evidence)

Publication history

First published: September 2012

Updated: No update planned

Assessed as up-to-date: September 2012

Remarks

- The GDG noted that the use of manoeuvres and other procedures requires training and that maternal discomfort and complications associated with these procedures have been reported.
- The GDG noted that uterine artery embolization requires significant resources, in terms of the cost of the treatment, the facilities, and the training of health care workers.

Background

Postpartum haemorrhage (PPH) is defined as blood loss of 500ml or more within 24 hours after birth. PPH is the primary cause of nearly one-fifth of all maternal deaths globally. Most of these deaths occur during the first 24 hours after birth. The majority could be prevented through the use of prophylactic uterotonics during the third stage of labour, and by timely and appropriate management.

Uterine artery embolization involves the use of percutaneous transcatheterization, in order to complete occlude both uterine arteries with particulate emboli and ultimately reduce pelvic bleeding.
Methods

The recommendation was developed using standardized operating procedures in accordance with the process described in the “WHO handbook for guideline development”, based on the GRADE approach (1, 2). Outcomes used for this recommendation were the prioritized outcomes from the WHO recommendations on prevention and treatment of postpartum haemorrhage (2012).(3)

No randomised controlled trials (RCTs) have examined the use of percutaneous transcatheter arterial embolization for the treatment of PPH. Evidence from case series and case reports was evaluated. (4-26) Data on relevant outcomes and comparisons were extracted.

WHO convened a Guideline Development Group (GDG) meeting in March 2012. This group of independent experts used the evidence profiles to assess evidence on effects on the pre-specified outcomes. GDG members discussed the balance between desirable and undesirable effects, overall quality of supporting evidence, values and preferences, magnitude of effect, balance of benefits versus disadvantages, resource usage, and feasibility, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

Further information on procedures for developing this recommendation are available here.

Recommendation question

For this recommendation, we aimed to answer the following question:

- For women with postpartum haemorrhage (P), does uterine artery embolization (I) compared to placebo or no treatment (C) improve outcomes (O)?

Evidence summary

No RCTs have examined the use of percutaneous transcatheter arterial embolization for the treatment of PPH. However, institutions equipped with adequate radiological facilities have reported using this intervention for the treatment of PPH.

Twenty-nine case series and 24 case reports have been published (>600 women) and studies report success rates (indicating that there was no use of hysterectomy or other invasive procedures) ranging from 82 % to 100 %.

Further information on evidence supporting this recommendation are available here.

Implementation considerations

- The successful introduction of evidence-based policies related to the prevention and management of PPH into national programmes and health care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. These processes may include the development or revision of national guidelines or protocols based on this recommendation.
The recommendation should be adapted into locally-appropriate documents and tools that are able to meet the specific needs of each country and health service. Modifications to the recommendation, where necessary, should be justified in an explicit and transparent manner.

- An enabling environment should be created for the use of this recommendation, including changes in the behaviour of health care practitioners to enable the use of evidence-based practices.
- Local professional societies may play important roles in this process and an all-inclusive and participatory process should be encouraged.

**Related links**

WHO recommendations on prevention and treatment of postpartum haemorrhage (2012) - [full document](#) and [evidence tables](#)

*Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors*

*Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice*

**Related resources**

*VIDEO: Active management of third stage of labour*

*Education material for teachers of midwifery. Managing postpartum haemorrhage.*

**Research implications**

The GDG did not identify any research priorities related to this recommendation.

**References**
