WHO recommendation on the use of prostaglandin E2 alpha for the management of retained placenta

21 September 2012

Recommendation

The use of prostaglandin E2 alpha (dinoprostone or sulprostone) in the management of retained placenta is not recommended

(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 found no empirical evidence to support recommending the use of uterotonics for the management of a retained placenta in the absence of haemorrhage. The above recommendation was reached by consensus.
- The WHO guide, “Managing complications in pregnancy and childbirth” (WHO, 2007), states that if a placenta is not expelled within 30 minutes after the delivery of a baby, the woman should be diagnosed as having a retained placenta. Since there is no evidence for or against this definition, the delay used before this condition is diagnosed is left to the judgement of the clinician.
- The same WHO guide also suggests that in the absence of haemorrhage, the woman should be observed for a further 30 minutes after the initial 30 minutes, before the manual removal of the placenta is attempted.
- The GDG noted that spontaneous expulsion of the placenta can still occur, even in the absence of bleeding. A conservative approach is therefore advised and the timing of the manual removal of the placenta as a definitive treatment is left to the judgement of the clinician.
- The recommendation regarding the use of prostaglandin E2 is informed by a lack of evidence on this question and also by concerns related to adverse events, particularly cardiac events.
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.

The term 'retained placenta' is used when the placenta has not been delivered within one hour after the birth of the baby (WHO 1990). Retained placenta is a potentially life-threatening complication of the third stage of labour. If untreated, there is a high risk of maternal death from haemorrhage or infection.

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)

Two randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. (4,5) Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest.

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 all women with retained placenta (P), does the use of prostaglandin (I) compared to placebo, no treatment or other uterotonics (C) improve maternal outcomes (O)?

Evidence summary

One double-blind RCT was identified (50 women) which compared sulprostone versus placebo for the treatment of retained placenta (van Beekhuizen 2006).

The intended recruitment size was over 100 patients, but the trial was stopped prematurely and sulprostone given to all remaining cases.

The authors reported a lower risk of the manual removal of the placenta (RR 0.51; 95% CI 0.34 to 0.86) and an increased risk in the use of blood transfusion in the sulprostone group (RR 2.26; 95% CI 1.14 to 4.12). A small, ongoing trial (van Beekhuizen 2009) is investigating the role of misoprostol in the management of
retained placenta (the recruitment phase has been completed but no results are as yet available). However, there is no empirical evidence for or against the use of other uterotonics for the treatment of retained placenta.

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**

3. van Beekhuizen HJ, de Groot AN, De Boo T, Burger D, Jansen N, Lotgering FK. Sulprostone reduces the need for the manual removal of the placenta in patients with retained placenta: a randomized


Citation:


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Home > WHO recommendation on the use of prostaglandin E2 alpha for the management of retained placenta