WHO recommendation on routine antibiotic prophylaxis for women undergoing manual removal of the placenta

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Recommendation

Routine antibiotic prophylaxis is recommended for women undergoing manual removal of the placenta.

(Low-quality evidence, strong recommendation)

Publication history

First published: September 2015

Updated: no update planned

Assessed as up-to-date: September 2015

Remarks

- Although there is no clear indication of benefits from the available evidence, the GDG decided to recommend prophylactic antibiotic use for this condition based on consensus after considering the potentially higher risk of infection related to the invasive nature of intrauterine manipulation required for manual placental removal. The group also considered indirect evidence of the benefit of prophylactic antibiotics from studies of caesarean section and abortion, as well as observational studies of other intrauterine manipulations.
- This recommendation is based on updated evidence and is consistent with existing WHO guidance on the treatment of postpartum haemorrhage which recommends a single dose of antibiotics (ampicillin or first generation cephalosporin) for manual placental removal.(1)
- In addition to antibiotic use, health care providers should take into account other factors that could decrease the risk of infection, such as observing good hygiene and general aseptic technique during the procedure and prevention or treatment of anaemia in the woman.
- This question was considered a research priority for settings in which prophylactic antibiotics are not routinely administered and those where the baseline risk of infectious morbidity is low. However, the GDG acknowledged that conducting a randomized trial may be challenging given the current clinical practice.

Background

Bacterial infections during labour and the puerperium are among the leading causes of maternal mortality worldwide, accounting for about one tenth of the global burden of maternal deaths.(2, 3) While the number of deaths arising from these infections has decreased considerably in high-income settings, the situation has
not improved in resource-limited settings. Most of the estimated 75,000 maternal deaths occurring worldwide yearly as a result of infections are recorded in low-income countries. (4) Although the reported incidence in high-income countries is relatively low (between 0.1 and 0.6 per 1000 births), it is nonetheless an important direct cause of maternal mortality. (4, 5)

Apart from deaths and acute morbidities associated with infections during or following childbirth, long-term disabilities such as chronic pelvic pain, fallopian tube blockage and secondary infertility can also occur. Maternal infections around childbirth also have a considerable impact on newborn mortality, and an estimated 1 million newborn deaths are associated with such infections annually. (6, 7) In addition, infection-related morbidities and prolonged hospitalization can interfere with mother–infant bonding in the first days after birth.

Methods

The recommendation was developed using standardized operating procedures in accordance with the process described in the “WHO handbook for guideline development”, guided by the GRADE approach. (8) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of maternal peripartum infections (2015). (9)

An updated Cochrane review that evaluated this question did not find any eligible randomized controlled trial to include. (10) Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest, including the assessment and judgments for each outcome, and the estimated risks.

WHO convened a Guideline Development Group (GDG) meeting on recommendations on prevention and treatment of maternal peripartum infections in September 2015, where this recommendation was developed. The GDG comprised of a group of independent experts, who 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 of stakeholders, resource requirements, cost-effectiveness, acceptability, feasibility and equity, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

Recommendation question

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

- Among women undergoing manual removal of retained placenta following vaginal birth (P), does antibiotic prophylaxis (I), compared with no antibiotic prophylaxis (C), prevent infectious morbidities and improve outcomes (O)?

Evidence Summary

An updated Cochrane review that evaluated this question did not find any eligible randomized controlled trial to include. (10) Evidence was extracted from a systematic review of nonrandomized studies which included three retrospective cohort studies of 567 women. (11) This review considered only women undergoing vaginal deliveries and excluded women with prior history of fever.

The studies were conducted in Germany, Norway and Bulgaria, and all compared outcomes among women receiving antibiotic prophylaxis with no intervention.

Only two critical outcomes (endometritis and puerperal fever > 37.5 °C, > 24 hours) were reported.

Antibiotic prophylaxis versus no treatment (EB Table 10)

- Compared with no antibiotic prophylaxis, antibiotic prophylaxis was not associated with significant differences in the number of women with puerperal fever [odds ratio (OR) 0.93, 95% CI 0.38 to 2.27;...
1 study, 302 women] or endometritis (OR 0.84 95% CI 0.38 to 1.85; 3 studies, 567 women).

**Implementation considerations**

- The successful introduction of this recommendation into national programmes and health-care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. The adaptation and implementation processes may include the development or revision of existing national guidelines or protocols based on this recommendation.
- The recommendation should be adapted into a locally appropriate document that can meet the specific needs of each country and health service. Any changes should be made in an explicit and transparent manner.
- A set of interventions should be established to ensure that an enabling environment is created for the use of the recommendations, and that the behaviour of the healthcare practitioner changes towards the use of this evidence-based practice.
- In this process, the role of local professional societies is important and an all-inclusive and participatory process should be encouraged.

**Research implications**

The GDG did not identify further research priorities on this topic.

**Related Links**


Supporting systematic review:


**References**


**Citation**


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