WHO recommendation on routine antibiotic prophylaxis for women with third- or fourth-degree perineal tear

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Recommendation

Routine antibiotic prophylaxis is recommended for women with third- or fourth-degree perineal tear.

(*Very low - quality evidence, strong recommendation*)

Publication history

First published: September 2015

Updated: no update planned

Assessed as up-to-date: September 2015

Remarks

- Despite the insufficient evidence of benefits, the GDG agreed that women with third- or fourth-degree perineal tear are at higher risk of infection in the postpartum period and took a consensus view to recommend the routine use of antibiotic prophylaxis for these conditions. The group puts its emphasis on the reduction in wound infection which might aggravate long-term consequences of third- or fourth-degree perineal tears (e.g. involuntary loss of flatus and/or faeces which affects quality of life) and, therefore, made a strong recommendation.
- This recommendation is consistent with the WHO postnatal care guideline on treatment of third- or fourth-degree perineal tears.(1)
- The GDG acknowledged that antibiotic administration following third- or fourth-degree tears is already a common clinical practice and, therefore, did not consider the question a research priority.

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.\(^\text{6, 7}\) 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.\(^\text{8}\)

Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of maternal peripartum infections (2015).\(^\text{9}\)

A Cochrane systematic review was conducted on the effectiveness and safety of routine administration of prophylactic antibiotics post-delivery to women with third- or fourth-degree perineal tear.\(^\text{10}\) In the review, randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. 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 with third- or fourth-degree perineal tear after birth (P), does routine antibiotic prophylaxis (I), compared with no antibiotic prophylaxis (C), prevent maternal infectious morbidities and improve outcomes (O)?

**Evidence Summary**

Evidence on the effectiveness and safety of routine administration of prophylactic antibiotics post-delivery to women with third- or fourth-degree perineal tear was extracted from a Cochrane systematic review that included only one trial with 147 women.\(^\text{10}\)

The trial was conducted in the USA. Women who were less than 18 years of age, GBS- or HIV-positive, had chorioamnionitis, history of inflammatory bowel disease or were already on antibiotics at the moment of inclusion were excluded from the study. The trial planned to recruit 310 women but was terminated early because of its inability to achieve the sample size within a reasonable time period. The rate of loss to follow-up at two and six weeks following discharge among women who participated in the trial was 27.2%.

Women in the treatment arm received a single dose of second-generation cephalosporin (cefotetan, cefoxitin or penicillin, or clindamycin if allergic to penicillin), while those in the control arm received placebo. In both groups, wound disruption or purulent discharge of the perineum after repair was assessed at two and six weeks postpartum.

**Antibiotic prophylaxis versus placebo (EB Table 12)**

- The trial showed a significant reduction in the number of women who had wound infection two weeks after delivery (RR 0.34, 95% CI 0.12 to 0.96; 107 women). However, there was no difference between
the groups at six weeks after delivery (RR 0.38, 95% CI 0.13 to 1.09; 128 women).
- The trial did not report on severe maternal infectious morbidity, puerperal sepsis, local discomfort, sexual dysfunction, duration of hospital stay, side-effects of antibiotics or antibiotic resistance.

**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 identified that further research on the following high-priority questions is needed:

- What are the effects of routine prophylactic antibiotics on perineal wound infection morbidity among women with episiotomy?

**Related Links**


Supporting systematic review:


**References**


Citation

WHO recommendation on routine antibiotic prophylaxis for women with third- or fourth-degree perineal tear (September 2015). The WHO Reproductive Health Library; Geneva: World Health Organization.

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