WHO recommendation against routine vaginal cleansing with chlorhexidine during labour in women with group B Streptococcus (GBS) colonization for prevention of early neonatal GBS infection.

01 September 2015

Recommendation

Routine vaginal cleansing with chlorhexidine during labour in women with group B Streptococcus (GBS) colonization is not recommended for prevention of early neonatal GBS infection.

(Very low-quality evidence, conditional recommendation)

Publication history

First published: September 2015

Updated: no update planned

Assessed as up-to-date: September 2015

Remarks

- This recommendation was based on the lack of clinical benefits for the neonate and not on the potential effect of the intervention on GBS-related maternal infectious morbidity.
- The GDG acknowledged the considerable variations in policies regarding the screening for GBS colonization in pregnant women. Therefore, the group agreed that this recommendation should be implemented within the context of local policy and guidance on screening for GBS colonization.

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.(1, 2) 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.(3) 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.(3, 4)
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.\(^5, 6\) 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.\(^7\) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of maternal peripartum infections (2015).\(^8\)

A Cochrane systematic review was conducted on the use of antiseptic agents for routine vaginal cleansing with an antiseptic agent in GBS-colonized women during labour to prevent neonatal infectious morbidities and improve neonatal outcomes.\(^9\) 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 pregnant women with vaginal, rectal or urethral colonization with group B Streptococcus (GBS) (P), does routine vaginal cleansing with an antiseptic agent during labour (I), compared with no vaginal cleansing with an antiseptic agent (C), prevent neonatal infectious morbidities and improve neonatal outcomes (O)?

**Evidence Summary**

Evidence on the use of antiseptic agents for routine vaginal cleansing with an antiseptic agent in GBS-colonized women during labour to prevent neonatal infectious morbidities and improve neonatal outcomes was extracted from a Cochrane systematic review of four trials that included 1125 preterm and term infants.\(^9\) The trials were conducted in Belgium, the Netherlands, Norway, Sweden and the UK.

Rapid screening or culture tests were used to diagnose GBS colonization. Most of the trials excluded women who received antibiotics before delivery, planned caesarean sections and fetal deaths. The interventions were different methods of application and preparations of chlorhexidine: vaginal wash, lubricated gloves with cream, or gel application around the vaginal fornices. Comparison groups included mechanical wash with placebo (sterile water) or no treatment.

The trials did not report on maternal morbidities, cost of care or maternal satisfaction.
Chlorhexidine (vaginal wash or gel/cream) versus placebo or no treatment (EB Table 3)

- The two trials reporting the incidence of early onset GBS-related neonatal morbidities within the first seven days of life found no differences between groups: GBS sepsis and/or meningitis (RR 2.32, 95% CI 0.34 to 15.63; 2 trials, 987 infants) or GBS pneumonia (RR 0.35, 95% CI 0.01 to 8.60; 2 trials, 987 infants). The number of infants colonized with GBS within the first seven days of life did not differ between the chlorhexidine and placebo or no treatment groups (RR 0.65, 95% CI 0.36 to 1.18; 3 trials, 328 infants).
- No neonatal deaths due to early-onset GBS infection were reported (1 trial, 190 infants).
- In the three trials that reported on maternal side effects, a significantly greater number of mothers developed minor side-effects (stinging and irritation) related to the use of chlorhexidine (RR 8.5, 95% CI 1.60 to 45.28; 3 trials, 1066 women). No adverse effects were observed in infants in either groups (3 trials; 1066 infants).

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 is the comparative effectiveness and safety of chlorhexidine and povidone-iodine for vaginal cleansing among women undergoing caesarean section in preventing maternal infection morbidities?
  - What are the effects of vaginal cleansing immediately before caesarean section among women at potentially higher risk of infection (e.g. women with ruptured membranes)
  - Is there any difference in the incidence of maternal infection morbidities between vaginal cleansing performed before or immediately after caesarean section?
- What are the potential adverse effects of the use of iodine containing antiseptics for vaginal cleansing for the newborn if the mother is planning to breastfeed?

Related Links


Supporting systematic review:


References
8. WHO recommendations for prevention and treatment of maternal peripartum infections. 2015

Citation

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