Topical umbilical cord care at birth

27 February 2009

No differences were found in umbilical cord infection rates when use of a topical antiseptic was compared with dry cord care or placebo. However, the author regards the available evidence as incomplete and recommends that in settings where the risk of bacterial infection is high, it may be prudent to use an antiseptic as per local preferences.

RHL Commentary by Capurro H

1. EVIDENCE SUMMARY

The revised review covers 22 trials involving 8959 subjects. Eleven of these trials are new, and include 2 conducted in a developing country (Thailand). There were no systemic infections or deaths—the primary outcomes of the review—in any of the trials. No differences were found in umbilical cord infection rates when a topical antiseptic was compared with dry cord care or placebo (Relative Risk [RR]: 0.53; 95% confidence interval [CI]: 0.35–1.13). Topical triple dye seemed to be more effective than alcohol (four trials, 1560 infants RR: 0.30; 95% CI: 0.19–0.49) or povidone-iodine (one trial, 183 infants RR: 0.15, 95% CI: 0.07–0.32) in preventing cord infection. Topical triple dye and antibiotics seemed to be associated with longer cord separation times. In one study use of a topical antiseptic was associated with less parental anxiety when compared with dry cord care.

The statistical methods used were appropriate. A subgroup analysis of term versus preterm and developed versus developing country settings would be appropriate if data permit.

2. RELEVANCE TO UNDER-RESOURCED SETTINGS

2.1. Magnitude of the problem

Each year, one-third of neonatal deaths worldwide (1.5 million) are due to infection (1), and many of them begin as umbilical cord infection. Simple preventive aseptic practices are not universally implemented. In 14 Latin American countries nearly 100 000 infant deaths of babies less than 1 year old were studied. Up to 16% of the deaths were due to infection (2), ranging between 31.3% in El Salvador and 7.5% in Costa Rica. Given the high range of institutional deliveries in the region (with the exception of 24.2% in Haiti) (3), cord infections should be preventable in most cases.

2.2. Applicability of the results
Umbilical cord infections can occur in all settings. However, they are more likely to occur in low-income countries and in settings where the majority of births are not attended by a skilled attendant. All but two the trials included in the review were hospital-based conducted in developed countries. In some settings popular cultural or traditional practices lead to higher susceptibility to cord infection.

2.3. Implementation of the intervention

The patchy evidence reviewed does not lead to a recommendation to implement a specific intervention. At the present time the best way to handle the umbilical cord is not known, regardless of setting. In settings where the risk of bacterial infection is high, it may be prudent to use an antiseptic as per local preferences.

3. RESEARCH

Given that up to a third of neonatal deaths are due to infections, randomized controlled trials with similar outcome indicators as indicated in this review should be undertaken. It would be important to conduct those trials in countries and settings that have high neonatal infection and mortality rates.

References


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