TITLE: Optimal In-Hospital Umbilical Cord Care for Newborns: Clinical Evidence and Guidelines

DATE: 11 July 2013

RESEARCH QUESTIONS

1. What is the clinical evidence regarding optimal in-hospital umbilical cord cleaning and care to prevent infections in newborns?

2. What are the evidence-based guidelines regarding optimal in-hospital umbilical cord care for newborns?

KEY MESSAGE

Two systematic reviews, two randomized controlled trials, and two non-randomized studies were identified regarding optimal in-hospital umbilical cord cleaning and care to prevent infections in newborns. No relevant evidence-based guidelines were identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 6), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2003 and June 28, 2013. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two systematic reviews, two randomized controlled trials, and two non-randomized studies were identified regarding optimal in-hospital umbilical cord cleaning and care to prevent infections in newborns. No relevant health technology assessment reports or evidence-based guidelines were included. Trials pertaining to low or middle income countries were not included in this report. Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Overall, evidence from two systematic reviews\(^1,2\) and one non-randomized study\(^6\) suggested that antibacterial treatments are not superior to dry cord care for the prevention of umbilical cord infections or bacterial colonization in newborns living in developed countries. The included randomized study that compared dry cord care with antibacterial treatment, with triple dye and alcohol, found higher instances of bacterial colonization in the dry cord group.\(^4\) The addition of chlorhexidine to an alcohol swab regimen may be more effective in preventing infections,\(^3\) and the addition of alcohol to triple dye application was likely unnecessary.\(^5\) Further detail is provided in Table 1. No relevant evidence-based guidelines were identified.

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<th>Table 1: Details of Included Studies</th>
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<td><strong>Author, Study Year; Study Objective</strong></td>
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<td><strong>Systematic Reviews and Meta-Analyses</strong></td>
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<td>Imdad et al., 2013</td>
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<td>Author, Study Year; Study Objective</td>
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<td>Zupan et al., 2004; To evaluate methods of topical umbilical cord care</td>
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<td>Oishi et al., 2004; Compare methods of umbilical cord care</td>
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<td>Janssen et al., 2003; Compare antibacterial cleaning versus dry umbilical cord care</td>
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<td>Suliman et al., 2010; Compare methods of antibacterial umbilical cord care</td>
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<td>Shoaeib et al., 2005; To compare methods of cord care</td>
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CHD = chlorhexidine; n = number of participants in the group
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Non-Randomized Studies


Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Clinical Guidelines – Rigour of Methods Unknown


Out-of-hospital Studies


Umbilical Cord Care in Preterm Infants


Additional References
