TITLE: Umbilical Cord Clamp Removal: A Review of the Clinical Benefits and Harms

DATE: 07 April 2011

CONTEXT AND POLICY ISSUES

The umbilical cord typically contains two arteries and a vein, surrounded by tissue. During the course of pregnancy the umbilical cord connects the fetus to its mother’s placenta. Soon after an infant is born, the umbilical cord is clamped and then cut. Clamping the umbilical cord before it is cut prevents potentially life-threatening conditions, such as excess bleeding. Current clinical practice guidelines suggest removing the umbilical cord clamp before an infant is discharged from hospital. Available hospital protocols indicate that the umbilical cord clamp is removed before the infant is discharged from hospital. These hospital protocols do not address the cost of cord clamp removers or any clinical benefits or harms to the infant associated with cord clamp removal.

This report will review the evidence on the clinical benefits and harms and cost-effectiveness of umbilical cord clamp removal on newborns and the risk of not removing the umbilical cord clamp prior to hospital discharge. This information will be used to inform policy decisions related to the removal of umbilical cord clamp removal on newborns prior to discharge from the hospital.

RESEARCH QUESTIONS

1. What are the clinical benefits and harms of umbilical cord clamp removal on newborns prior to discharge from hospital?

2. What are the risks to newborns when umbilical cord clamps are not removed prior to discharge from hospital?

3. What is the cost effectiveness of umbilical cord clamp removal on newborns prior to discharge from hospital?
KEY MESSAGE

There is a lack of evidence available on the clinical benefits and harms and cost-effectiveness on the removal of umbilical cord clamps prior to hospital discharge. No evidence was found on the risks to newborns of leaving the cord clamps attached until the umbilical cord falls off naturally.

METHODS

A limited search was conducted on key resources including PubMed, Ebsco CINAHL, The Cochrane Library (2011, Issue 1), University of York Centre for Reviews and Dissemination (CDR) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and February 17, 2011.

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, economic evaluations, and evidence-based guidelines.

SUMMARY OF FINDINGS

No relevant health technology assessment reports, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, or evidence-based guidelines were identified in the literature search results. Articles of potential interest are provided in the appendix.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING:

No literature assessing umbilical cord clamp removal was found using the search criteria outlined above. As a result, no conclusions can be drawn as to the clinical benefits and harms and cost-effectiveness on the umbilical cord clamp removal or risks to newborns of not removing umbilical cord clamps prior to hospital discharge.

PREPARED BY:

Canadian Agency for Drugs and Technologies in Health
Tel: 1-866-898-8439
www.cadth.ca
REFERENCES:


APPENDIX:

Guidelines and recommendations (not evidence-based)
