Newborn Cord Care is Clean Cord Care as Effective as Antiseptic Agents in Preventing Infection and Decreasing Cord Separation Time?

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NEWBORN CORD CARE: IS CLEAN CORD CARE AS EFFECTIVE AS ANTISEPTIC AGENTS IN PREVENTING INFECTION AND DECREASING CORD SEPARATION TIME?

Mother/ Baby Unit:
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Different strategies can be used to prevent infection of umbilical cords

- General Antiseptics
  - Triple-Dye
  - Chlorhexidine
- General Antibiotics
- Alcohol
- Olive-Oil
- Breast Milk

http://newborns.stanford.edu/PhotoGallery/Cord.html
CURRENT PRACTICE AT LVHN

• Triple-dye is applied to cord after initial bath and followed with alcohol to the cord three times a day
• Care is taken to prevent spill-over of dye onto surrounding skin
• Diapers are arranged to prevent urine from contaminating the cord
• Clamp is removed after 24 hours; cord naturally falls off by 2 weeks but care practices may delay separation

PURPOSE

The purpose of the proposed project is to change the practice of healthy newborn cord care on the Mother/Baby unit at Lehigh Valley Hospital (Cedar Crest Campus) from the use of Triple-dye antiseptic and alcohol application to the use of clean cord care (soap & water) using the best available evidence.
PICO QUESTION

Are healthy newborns who receive clean cord care (soap & water) compared to those who receive antiseptic agent application (triple dye & alcohol) at an increased risk for infection and prolonged cord separation?

• P: healthy newborns
• I: clean cord care (soap and water)
• C: antiseptic agents
• O: increased risk for infection
IOWA MODEL OF EVIDENCE-BASED PRACTICE

• Knowledge Focused Trigger
  • New research and other literature
  • Unnecessary practice
  • Evidence shows that in developed countries, there is no need for the use of triple-dye or alcohol for the prevention of infection.

RESEARCH

• Search engines used:
  • PubMed
  • Ebscohost
  • Medline
  • CINAHL
  • Google Scholar
  • Cochrane

• Key words used:
  • Dry cord care
  • Topical umbilical cord care
  • Omphalitis
  • Antiseptic agents
  • Umbilical cord care
  • Anti-septic agents, local

http://research.unc.edu/offices/research-development/
EVIDENCE

• 16 articles
  • 4 Level I
  • 8 Level II
  • 3 Level III
  • 1 Level IV

• Interventions
  • Dry Cord Care (13), General Antiseptics (4), Triple Dye (7), Chlorhexidine (5), General Antibiotics (4), Alcohol (14), Olive-Oil (2), Breast Milk (2)
EVIDENCE

• There is no need for either alcohol or antiseptic

• Use of alcohol and general antiseptics (Triple-dye, etc.) increase cord separation time

• Increased cord separation time is likely to increase risk for infection

• All umbilical cords have normal bacteria present, but that bacteria rarely leads to infection

EVIDENCE

• Triple-Dye and alcohol on infant’s skin can lead to skin breakdown

• If mothers are taught appropriately about what to expect from clean cord care their reactions are more positive towards clean cord care compared to Triple-Dye or alcohol

• Clean cord care is the suggested form of care in developed countries, such as the United States of America

• Infection rates are not found to be higher for babies treated with clean cord care compared to those treated with triple-dye and alcohol
IMPLEMENTATION

• Preparation:
  • Unit staff educated on clean cord care prior to implementation
  • Handouts
  • Verbal education
• Follow-up questionnaire sheet created
IMPLEMENTATION

• Implementation: Beginning 05/05/14 @0000 on MBU
  • Triple Dye and alcohol no longer applied to cords
  • Handouts on clean cord care placed in admission folder for mother’s education
  • Mother’s educated on admission by admitting RN
    • Mothers advised to record date of cord separation
    • Mothers informed about follow-up phone calls after 2 weeks of delivery
IMPLEMENTATION

• Education:
  • Mothers instructed to clean the umbilical cord 2-3x day/as needed using a cotton ball or clean washcloth with baby soap and water. Pat dry using clean washcloth and fold diaper down to allow air drying.
  • Mothers instructed to monitor for signs and symptoms of infection such as redness, drainage/pus, swelling, bleeding or lesions.

IMPLEMENTATION

• Education (cont’d.)
  • Mothers instructed to notify their pediatrician if they notice any signs of infection.
  • Mothers will take home a paper to write record the date of cord separation. They will also keep track of any signs of infection and any phone calls made to the pediatrician.
  • Education is key to this practice change.
IMPLEMENTATION

• Follow-up
  • RN’s will make follow-up phone calls and record data for cord separation time, signs of infection, phone calls to pediatricians, mothers’ comfort level, and mothers’ compliance with clean cord care

• Evaluation Process:
  • Mothers called after weeks of delivery date (starting 05/19/14)
    • Same questionnaire used for all mothers
  • Practice Guideline
    • If no infections reported by 06/14/14, guideline will be updated to clean cord care with discontinuation of Triple-Dye and alcohol
EVALUATION

• Responses: 123 total infants born (05/05/14-05/17/14)
  • 119 calls made (one set of twins)
  • 63/120 - responded to questionnaire
    • 6/63 - disqualified for using alcohol
  • 47/120 - no response to questionnaire (x2)
  • 3/120 - Spanish speaking only
  • 3/120 - unable to contact by phone
  • 7/120 - cords still attached
  • 6/120 - not called due to infants in NICU
RESULTS

• Infections
  • Average: 0% infection rate
• Cord Separation Time
  • Average: 10.7 days until separation
• Maternal Compliance
  • Average: 93% compliant
• Average Maternal Comfort
  • Average: 95% comfortable
• Mothers had no current concerns
STRATEGIC DISSEMINATION OF RESULTS

• Educate staff and newborn parents
• Change/update the written policy
• Publish as an article
• Present at conferences

http://wesleyankids.org/children-and-youth-policies/
IMPLICATIONS FOR LVHN

• Our proposal is to eliminate the use of triple-dye and alcohol on the Mother/Baby Unit at LVHN and replace it with clean cord care (soap and water) per Evidence-Based Research by June 14, 2014
REFERENCES


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