

Vaginal Cleansing to Reduce Post C-Section Infection

L. Chesney Thompson, MD. & Ronald Gibbs, MD.
(Original Lecture)
Julie Scott, MD
Department of Obstetrics & Gynecology
University of Colorado

Semmelweis would be Proud



- Father of asepsis in obstetrics and gynecology
- Childbed fever was caused by decomposing animal organic matter
- Chlorinous handwashing prior to entering the labor ward
 - Further refined to chlorinous hand washing between patients
- Deaths reduced to 1% (from 10%) from childbed fever

Causes of Post Delivery Infection

- Endometritis (6-27%)
 - 1-3% of all deliveries
 - 10X fold higher risk with cesarean section
 - Most commonly the result of ascending infection
 - Anaerobes; polymicrobial
- Clinically important fever (5-24%)
- Wound infection (2-9%)

Risk Factors for Post Cesarean Infection

Maternal Factors

- Chronic medical conditions
- Obesity
- Substance use
- Tobacco use
- Age/Parity
- Lack of prenatal care
- MRSA colonization
- Lower socioeconomic status

Obstetric Factors

- PPRROM
- Failed labor attempt
- Frequency of vaginal examinations
- Internal monitors
- Preexisting vaginal infections
- Emergency delivery
- Chorioamnionitis
- Increased bleeding/hemorrhage
- Length of surgery

Vaginal Cleansing

Goals

- Reduce morbidity and mortality related to post cesarean infection
 - Endometritis has been the one common morbidity that has been affected by the practice of vaginal cleansing

Benefits

- Increased postpartum wellness
- Decreased length of stay, reduced readmission rates or visits to the ER



Review

Vaginal Cleansing Before Cesarean Delivery

A Systematic Review and Meta-analysis

Claudia Caissutti, MD, Gabriele Saccone, MD, Fabrizio Zullo, MD, Johanna Quist-Nelson, MD, Laura Felder, MD, Andrea Ciardulli, MD, and Vincenzo Berghella, MD

- 16 Trials of 4837 women
 - All RCTs with comparison of vaginal antiseptic compared to placebo or no intervention
 - Vaginal cleansing by douches, wipes or sponges
 - Trials included had vaginal preparation no more than an hour prior to surgery and after a decision for cesarean section was made
 - Primary outcome=endometritis
 - Secondary outcome=postoperative fever, wound infection and women complications including seroma, hematoma

Caissutti. Vaginal Preparation Before Cesarean Delivery. Obstet Gynecol 2017.

uhealth

Review

Vaginal Cleansing Before Cesarean Delivery

A Systematic Review and Meta-analysis

Claudia Caissutti, MD, Gabriele Saccone, MD, Fabrizio Zullo, MD, Johanna Quist-Nelson, MD, Laura Felder, MD, Andrea Ciardulli, MD, and Vincenzo Berghella, MD

- Majority used povidone iodine for the cleansing solution
- Majority used a sponge stick for the vaginal cleanse for at least 30 seconds
- Endometritis rate reduced from 8.8% to 4.5% (RR 0.52)
 - Most significant for women in labor and with rupture membranes
- Postpartum fever rate reduce from 14.9% to 9.4% RR 0.65)
- No difference is wound infection or complications

Caissutti. Vaginal Preparation Before Cesarean Delivery. Obstet Gynecol 2017.

uhealth



Implementation of vaginal cleansing prior to cesarean delivery to decrease endometritis rates

Laura Felder^a , Amanda Paternostro^a, Johanna Quist-Nelson^b , Jason Baxter^b and Vincenzo Berghella^b 

^aDepartment of Obstetrics and Gynecology, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, PA, USA;

^bDepartment of Obstetrics and Gynecology, Division of Maternal Fetal Medicine, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, PA, USA

- Before-after quality improvement project with a retrospective cohort design
 - At Thomas Jefferson University Hospital
 - Protocol implemented 1/2017 with multidisciplinary education
 - Inclusion: Nonemergent CD in patients with rupture membranes or labor >24 weeks (120 patients)
 - 10% povidone iodine unless allergy (then chlorhexidine 4%)

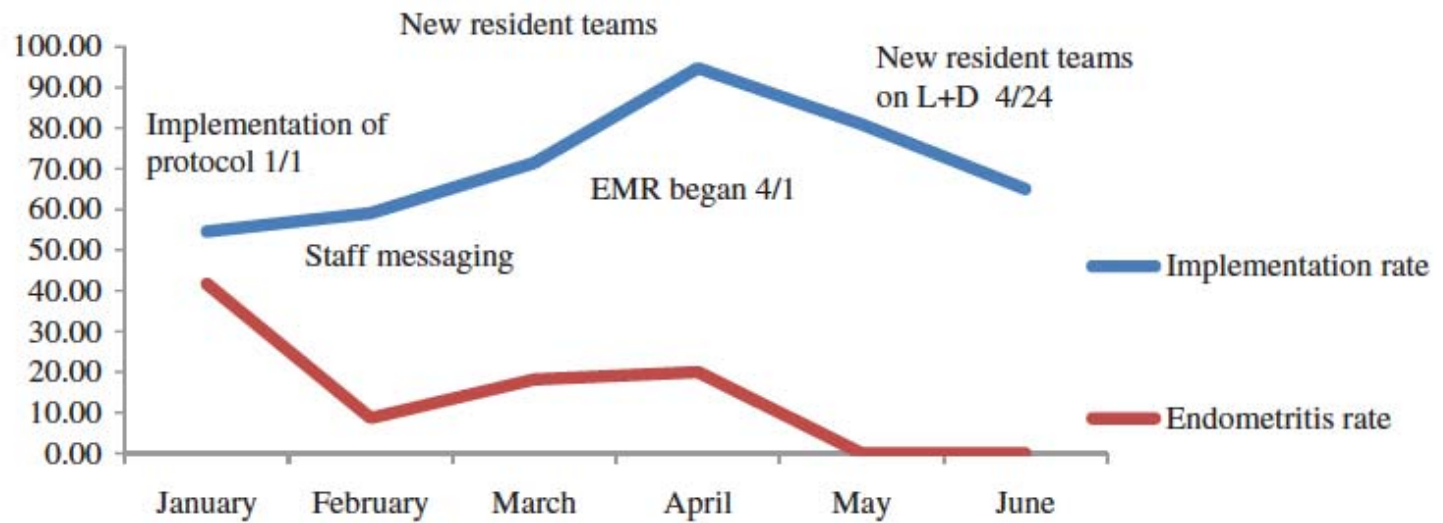


Figure 1. Rate of vaginal cleansing implementation and endometritis by month.

Copyright 2004 by Randy Glasbergen.
www.glasbergen.com



“I want you to find a bold and innovative way to do everything exactly the same way it’s been done for 25 years.”

uhealth

Summary: Vaginal Cleansing Prior to Cesarean Delivery

- Inexpensive
- Well tolerated and no adverse effects
 - Always screen for infection
- Easy to perform
 - Scheduled cases
 - Failed labor; nonemergent
 - Some cases on nonemergent non reassuring fetal status cases (provider input)
- 10% Povidone Iodine with at least 30 sec of solution/sponge stick in the vagina
- Multidisciplinary instruction and RN/MD champion can help with success of implementation

uhealth

Question

1. Are you using vaginal cleansing
2. What preparation
3. Which patients are you using it on.