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Skin Preparation for Preventing Infection Following Cesarean Section

Levi Fenton

Cedarville University, levifenton@cedarville.edu

Alexandra Barford

Cedarville University, abarford@cedarville.edu

Adrienne Barnett

Cedarville University, adriennebarnett@cedarville.edu

Meghan Becker

Cedarville University, meghannbecker@cedarville.edu

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Skin Preparation for Preventing Infection Following Cesarean Section

Alex Barford, Adrienne Barnett, Meghan Becker, Levi Fenton
Cedarville University School of Nursing

PATIENT CARE ISSUE

Background & Significance:

- Caesarean sections make up 32.8% of births in the United States.¹
- Most hospitals use chlorhexidine or iodine for preventing surgical site infection post caesarean section.²
- Approximately 300,000-500,000 SSI's a year.³
- Current infection rate after c-section is 1-4%.⁴
- Though many hospitals use different methods of disinfecting, it is still not certain which method is the most effective.

EVIDENCE-BASED PRACTICE QUESTION

Question: Which antiseptic, chlorhexidine or iodine, is more effective in preventing post-operative infection after a caesarean section?

Population: Expectant woman who were going to have a caesarean procedure.

Intervention: Using an antiseptic agent to prevent infection after a surgical procedure.

Comparison: Chlorhexidine and iodine antiseptic agents.

Outcome: To decrease rates of post-operative infection

REGISTERED NURSE INTERVIEW

Interview with R.N. at Miami Valley Hospital who worked on the labor and delivery unit.

Preparation for cesarean surgical skin incision included:

- 1) Painting the abdomen with iodine from the navel to the groin
- 2) Wiping down the iodine with a sterile towel
- 3) Repeating this process three times before putting the drapes in place.

METHODS

The methods used in this research study included databases:

- PubMed
- Web of Science
- CINAHL
- Cochrane
- OneSearch
- Wiley Online Library.

Keywords searched were: c-section infection, c-section pre-op, iodine vs chlorhexidine, iodine preoperative care, iodine skin care, skin antiseptics, iodine as antiseptic, chlorhexidine and infection and skin prep.

Inclusion Criteria: Literature that talked about SSI's, c-section and preoperative skin care, and literature related to iodine and chlorhexidine

Exclusion Criteria: Studies done prior to 2004 and articles that contained surgeries that were not preoperative

SYNTHESIS OF EVIDENCE

Literature review of 14 articles

Target Antiseptics: Chlorhexidine and Iodine

Chlorhexidine is more effective	6/14 ^(5,6,7,8,9,12)
Comparison Studies between Chlorhexidine and Iodine	9/14 ^(4,5,6,7,8,9,10,11,12)
Iodine is More Effective	3/14 ^(2,13,14)

RESULTS

- The use of chlorhexidine instead of iodine is more effective in preventing surgical site infections based on literature review
- Recommendations are made for institutions not using chlorhexidine in their daily practice

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

- (1) Use chlorhexidine to paint abdomen from navel to groin before a caesarean section.
- (2) If budgets are set, increase budget to account for increase cost of chlorhexidine.

LIMITATIONS

- Limited studies found that contained information about surgical site infections and cesarean sections
- Some pertinent articles conducted research outside of the United States

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