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

Follow this and additional works at: http://digitalcommons.cedarville.edu/research_scholarship_symposium

Part of the Surgery Commons

Fenton, Levi; Barford, Alexandra; Barnett, Adrienne; and Becker, Meghan, "Skin Preparation for Preventing Infection Following Cesarean Section" (2014). The Research and Scholarship Symposium. 6.
http://digitalcommons.cedarville.edu/research_scholarship_symposium/2014/poster_presentations/6
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 cesarean 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 realted 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

<table>
<thead>
<tr>
<th>Chlorhexidine more effective</th>
<th>6/14(5, 6, 7, 8, 9, 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison Studies between Chlorhexidine and Iodine</td>
<td>9/14(4, 5, 6, 7, 8, 9, 10, 11, 12)</td>
</tr>
<tr>
<td>Iodine More Effective</td>
<td>3/14(2, 13, 14)</td>
</tr>
</tbody>
</table>

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 cesarean 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

ACKNOWLEDGEMENTS

RN nurse at Miami Valley Hospital in the Labor and Delivery Unit.
Dr. Carrie Keib

REFERENCES

15. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2812878