5-31-2017

**Vaginal Preparation with Povidone Iodine prior to Cesarean Delivery**

Laura Felder, MD  
*Thomas Jefferson University*

Amanda Paternostro, MD  
*Thomas Jefferson University*

Johanna Quist-Nelson, MD  
*Department of Obstetrics and Gynecology, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania*

Follow this and additional works at: [https://jdc.jefferson.edu/patientsafetyposters](https://jdc.jefferson.edu/patientsafetyposters)

Part of the [Medicine and Health Sciences Commons](https://jdc.jefferson.edu/patientsafetyposters)

Let us know how access to this document benefits you

**Recommended Citation**

[https://jdc.jefferson.edu/patientsafetyposters/55](https://jdc.jefferson.edu/patientsafetyposters/55)

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's Center for Teaching and Learning (CTL). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in House Staff Quality Improvement and Patient Safety Conference (2016-2019) by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.
Background

- Postpartum endometritis is an infection of the lining of the uterus that occurs in 6-27% of postpartum patients (1). It is diagnosed by fundal tenderness and fevers.
- Risk factors include chorioamnionitis prolonged rupture of membranes, and cesarean delivery (CD).
- Complications include bacteremia, sepsis, and intra-abdominal abscess formation (1). In rare cases hysterectomy may be required.
- Abdominal preparation with chlorhexidine solution and preoperative antibiotics are used for prophylaxis.
- Vaginal preparation with povidone iodine prior to CD has been shown to further reduce the risk of postoperative endometritis.
  - Cochrane Review showed the rate of postoperative endometritis dropped from 15.4% to 1.4% when vaginal preparation was performed prior to CD in patients with ruptured membranes (1).
  - Vaginal preparation has not been implemented as a standard of care.
- Thomas Jefferson University Hospital (TJUH) postpartum endometritis occurred in 69 of 1878 (3.67%) deliveries in 2016. Following cesarean delivery the rate of postpartum endometritis was 8.66% (48/554).

Objectives

- To reduce the rate of postoperative endometritis in patients undergoing cesarean delivery by implementing a new departmental guideline for vaginal preparation prior to cesarean sections, after labor or rupture of membranes.

Methods

- A guideline was implemented for vaginal preparation prior to CD in patients who have labored or have ruptured membranes.
- For patients with an allergy to iodine or shellfish, 4% chlorhexidine scrub was used in place of iodine per American College of Obstetricians and Gynecologists (ACOG) recommendation (2).
- Residents were trained on preparation technique and implementation occurred on January 9, 2017.
- For each patient included we tracked the presence of labor or ruptured membranes and type of vaginal preparation received.
- After the launch of EPIC, implementation is tracked directly in the electronic medical records (EMR).

Results

2017-1 Cesarean Deliveries

<table>
<thead>
<tr>
<th>Total # CD Jan-March = 130</th>
<th>Not laboring and intact membranes = 62</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboring and/or ruptured = 68</td>
<td>Stat cesarean section = 8</td>
</tr>
<tr>
<td>Laboring and/or ruptured, non-emergent CD = 60</td>
<td></td>
</tr>
<tr>
<td>Received vaginal prep = 35</td>
<td></td>
</tr>
</tbody>
</table>

58% of eligible patients received vaginal preparation

Endometritis rates after c/s by quarter

The rate of endometritis after implementation of the protocol is lower than the rate in Q1 of 2016 but this difference is not statistically significant.

Discussion

Outcome:
For the first quarter of 2017 there was no difference in endometritis rates after cesarean delivery following implementation of a vaginal prep protocol in ruptured and laboring patients.

Limitations:
- Limited follow up data available (3 months)
- Data comes from automated coding

Challenges:
- Tracking implementation
- Compliance with new protocol

Future Steps:
- Increasing implementation and documentation of vaginal preparation for patients in labor or with ruptured membranes
  - Automated prompt in EMR
  - Reminders at big board
  - Signs in OR
- Analysis of data over longer time period with confounding variables taken into account including chorioamnionitis rates, abdominal preparation rates, prophylactic antibiotic utilization and timing, urgency status of cesarean section, and length of rupture of membranes.

Sources