Introduction

- In modern Obstetrics and Gynecology, C-section is the most common operation in the hospital. Due to continuous rise in C-section procedures, the number of women with postpartum infections is anticipated to increase (1,2).
- Surgical site infections (SSI) following post C-sections are a major problem in the healthcare systems and is associated with longer stays in the hospital and increased medical cost. (3)
- The majority of pathogens causing SSI are derived from the skin (3). Preoperative skin cleaning including aseptic techniques, are proven to lower the risk of SSI. The common pre-op skin prep includes Chlorhexidine and povidone-iodine (Betadine).
- Here we describe a OBGYN patient with whom Betadine was used as an antiseptic for a C-section who subsequently had an allergic reaction.

Case Presentation

- A 28 year old G2P1 underwent a repeat low transverse cesarean section at 39 weeks gestation. The patient informed the medical team that she had no known allergies and no significant past medical history.
- She received Chlorhexidine for her first C-section with no complications. Due to a change in hospital protocol, Betadine was used, specifically a 7.5% scrub followed by a Betadine 10% paint. The surrounding skin was then prepped with Chlorhexidine.
- The surgical incision was closed with 4-0 Vicryl and Steri Strips and applied only over the closed incision.
- Less than 24 hours after the procedure, the patient began to complain of severe itching that progressively worsened.
- This prompted the early removal of the incision cover, revealing erythema and warm to touch skin with vesicular blisters.
- The Betadine was subsequently removed from the incision site.

Figure 1: Patient Skin Reaction

Figure 1: Patient's erythematous allergic reaction of the skin to Betadine is seen here post C-section.

Table 1. Past studies with Iodine and Chlorhexidine characteristics

<table>
<thead>
<tr>
<th>Chlorhexidine</th>
<th>Iodine</th>
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<tbody>
<tr>
<td>Adhesion has been described as superior in comparison to Betadine and “completely” excellent (5)</td>
<td>Adhesion has been described as 64% excellent (5)</td>
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<td>Decreased risk of surgical site infection and sepsis (6)</td>
<td>Increased risk of infection and potential post-op sepsis risk (6)</td>
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Treatment/Discussion

- The patient was started on an oral regimen of steroids and hydroxyzine.
- The itching resolved over the course of 3-4 days and at time of discharge the patient was continued on hydroxyzine but steroids was discontinued.
- At the patient's 2 weeks post-op visit, all symptoms had resolved but residual skin hypopigmentation remained.
- The patient's 6 weeks postpartum visit, hypopigmentation of the skin had completely resolved.
- The patient did not acquire any infections following the procedure; however, it was noted that the allergic reaction lead to delayed wound healing.

Conclusion

- In this case, the patient was exposed to two potentially allergic skin preps.
- While the patient only reaction to Betadine, the reaction to Chlorhexidine was mild.
- Overall, when reviewing various skin preps used for pre-op C-sections, Chlorhexidine may be better for infection prophylaxis; however, the choice of skin prep should be individualized to each patient based on history, allergies, scheduled versus emergent nature of surgeries.
- Out patient described did well in the post op setting with steroids and hydroxyzine.

References