



A Post-operative Reaction to Skin Prep Betadine in Postpartum Women

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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 health care systems and is associated with longer stays in the hospital and increased medical cost. (3)
- The majority of pathogen 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 was 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

Chlorhexidine	Iodine
After application, 2 minutes of waiting required due to increased drying time and due to flammable nature (4)	Patient can be immediately draped after application of Iodine (4)
Adhesion has been described as superior in comparison to Betadine and "completely" excellent (5)	Adhesion has been described as 64% excellent (5)
Decreased risk of surgical site infection and sepsis (6)	Increased risk of infection and potential post-op sepsis risk (6)

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.
- By 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.

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