



BloodSTOP® iX Helped Win Best in Category Award for Burn Wounds at the American Burn Association’s 51st Annual Meeting

Blue Ribbon Award



A Novel Hemostatic Agent Improves Split-Thickness Skin Graft Donor Site Healing



Conclusion

“A novel hemostatic agent reduces time to re-epithelialization of split thickness skin graft donor sites.”



Figure 1: (A) Intraoperative application of hemostatic agent BloodSTOP iX onto donor site post harvest, (B) Dressing takedown 7 days post intervention

Significance

Split-thickness skin grafts create secondary wounds at donor sites. The optimal donor site dressing is not established. One novel agent, designed as a hemostatic, is made of etherified sodium carboxymethyl cellulose as a water-soluble, bioresorbable nanocellulose matrix. When the product contacts blood, it forms a gel that controls bleeding and may provide an optimal milieu for healing. We present a series of ten patients on whom this product was used as part of the donor site dressings.

Methods

We identified 10 patients who were admitted to a single, verified burn center for burn management between July and September of 2018. All patients underwent tangential excision and debridement of their partial-thickness or full-thickness burns. The study agent was placed directly on all donor sites. This was wrapped with a petroleum-based occlusive dressing with 3% bismuth tribromophenate and dry gauze dressing. The entire dressing was left in place for seven days postoperatively, after which it was removed for wound inspection.

Results

Nine of ten dressings were taken down at the expected interval, seven days after the index operation. One dressing was taken down earlier due to a concern for bleeding after initiation of enoxaparin for chemical deep vein thrombosis prophylaxis; no active bleeding was found. The remaining wounds had visibly superior healing after the application of the study dressing, versus standard dressings. There was evidence of neo-epithelialization on initial study dressing removal, not seen with standard dressings. [Figure 1]

Lessons Learned

- Donor site dressing management continues to be an **evolving process**.
- Further research is needed to explore if **pain control from the donor site** is improved.

Clinical IV Poster 504

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BloodSTOP iX creates a buzz at ABA Conference!

LSP attended the 51st Annual Meeting of the American Burn Association on April 2-5, 2019, with intent to showcase BloodSTOP iX Hemostasis Dressing in this burn specialty.

Through our continued support to John Stroger Cook County Hospital and Health System (CCHHS) and Rush University Research Department, Chicago, IL, two clinical abstracts were submitted for Poster Rounds. ABA Poster Rounds provides an opportunity to explore a topic in-depth with a small group of researchers led by experts in the field. Each researcher in the topic area briefly presents their work for the group.

Poster Round Objectives:

1. Discuss the results of cutting-edge scientific clinical management, basic research, and other burn issues.
2. Identify opportunities to improve care of the burn injured patient.

CCHHS and Rush University researchers in attendance were Dr. Stathis Poulakidas, Dr. Thomas Xu, and selected members of the Cook County Burn Team. Two abstracts were submitted in the Wounds Category:

Clinical II Poster 342, *Minimizing Intra operative Hemorrhage in Wound Debridement using a Novel Topical Agent*, Presenters – Dr. Thomas Xu and Dr. Stathis Poulakidas

Clinical IV Poster 504, *A Novel Hemostatic Agent Improves Split-Thickness Skin Graft Donor Site Healing*, Presenters – Dr. Thomas Xu and Dr. Stathis Poulakidas

The abstracts contained early case studies that demonstrated the ability of BloodSTOP iX to rapidly stop post-debridement bleeding, and to accelerate donor site healing. This new information generated a lot of interest and follow-up questions from burn surgeons, nurses, practitioners, and researchers.

Clinical IV Poster 504 was awarded **Best in Category** for Wounds for exceptional results using BloodSTOP iX Hemostasis Dressing for bleeding control and promotion of tissue healing.

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Dr. Stathis Poulakidas, MD, FACS, Chief Director Burn Surgery (Left), Dr. Thomas Xu, MD (Middle), and Lason Magallones (Right)

Clinical II Poster 342 was presented at 51st Annual Meeting of the American Burn Association in 2019 using **BloodSTOP iX!**



Minimizing Intraoperative Hemorrhage in Burn Wound Debridement using a Novel Topical Hemostatic Agent



Conclusion

“Intraoperative blood loss is reduced with the use of a novel topical hemostatic agent.”

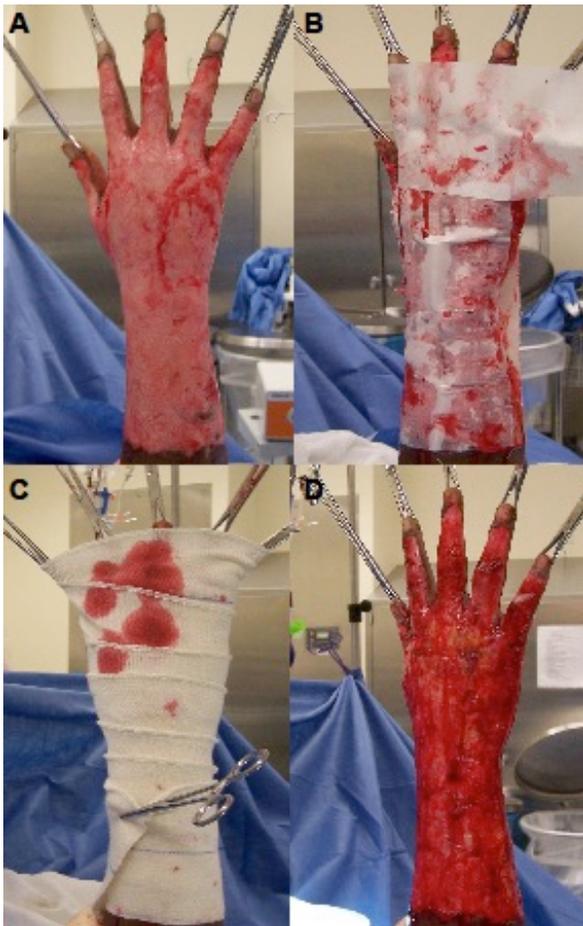


Figure 1: (A) Intraoperative pre debridement, (B) Application of BloodSTOP iX®, (C) Wrapping of compression dressing, (D) Dressing takedown

Significance

Hemorrhage from tangential excision in burn surgery is considerable. Inability to control hemorrhage can preclude timely removal of burns. Traditional methods such as suture ligation and electrocautery are time-consuming with the potential for major blood loss prior to hemostasis. Topical hemostatic agents have been developed to mitigate these issues. We sought to investigate the use of a topical hemostatic agent that uses an etherified sodium carboxymethyl cellulose to make a water-soluble, bioresorbable nanocellulose matrix for intraoperative hemorrhage control.

Methods

We identified 10 patients who were admitted to a single, verified burn center for burn management between July and September of 2018. All patients underwent tangential excision and debridement of their partial-thickness or full-thickness burns with immediate post-debridement application of the topical hemostatic agent. The topical hemostatic agent was left in place for twenty minutes. Hemostasis was ensured prior to securing the split-thickness skin graft.

Results

The study agent was placed over the wound bed immediate after debridement. This was followed by a dry collagen and silica based dressing wrapped in a compressive fashion and left in place for twenty minutes. Immediately after the dressing was taken down, excised areas were noted to be roughly 90% hemostatic with small punctate hemorrhages that were easily controlled with electrocautery. [Figure 1] Suture ligation was rarely needed. In prior cases without the use of the study agent, the wound bed was noted to be roughly 30% hemostatic immediately after excision and subsequent compressive dressing removal.

Lessons Learned

- **Controlling intraoperative hemorrhage** remains crucial component in all tangential excisions for burns.
- Future studies needed to see if this product can be used for **other applications in hemorrhage control.**

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