

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

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Introduction: Split-thickness skin grafts (STSG) 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: Ten patients were admitted to a single verified burn center for burn management between July and September 2018. All underwent tangential burn excision and STSG for their deep partial- or full-thickness burn wounds. 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. On two patients, split-thickness skin grafts were taken from bilateral lower extremities, with study agent only used on one extremity. The extremity with the study agent showed improved wound healing versus the side without the study agent. There was evidence of neo-epithelialization on initial study dressing removal, not seen with standard dressings, as shown in figure one and two.

Conclusions: The study agent is an effective option for wound care to improve healing. Our case series suggests decreased healing time of STSG donor sites without increased complications. In the future, we anticipate broader applications to aid in wound care.

Applicability of Research to Practice: There is no consensus for the optimal STSG donor site dressing. Etherified sodium carboxymethyl cellulose accelerates donor site healing.

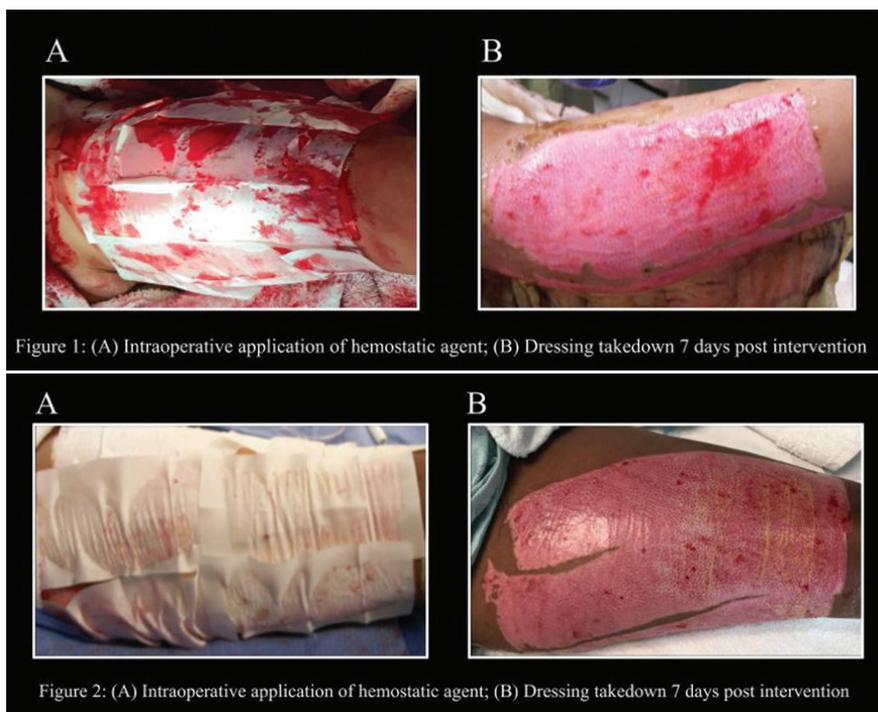


Figure 1: (A) Intraoperative application of hemostatic agent; (B) Dressing takedown 7 days post intervention

Figure 2: (A) Intraoperative application of hemostatic agent; (B) Dressing takedown 7 days post intervention