Use of a New Adhesive-Bordered Foam Dressing in the Management of Split-thickness Skin Graft Donor Sites

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Introduction

"Ideal" wound dressings have been described as dressings that protect the wound from desiccation and external contamination, reduce pain, absorb wound drainage and promote epithelialization. Despite numerous advanced dressings available, split-thickness skin graft donor sites are often treated with antiquated methods. This results in painful, unpredictable and potentially delayed post-operative wound healing.

Impregnated mesh dressings, placed on the wound and allowed to dry, have been a longstanding protocol for donor site management. However, recent studies indicate that several categories of dressings including calcium alginites, transparent film dressings and polyurethane foams, provide clinical benefits when compared to impregnated mesh. These include management of exudate, reduced dressing change frequency, less disruption of the wound bed, accelerated healing, facilitation of activities of daily living and enhanced patient comfort.

Background

In our facility, the current practice for dressing a post-operative skin graft donor site (SGDS) consists of an impregnated fine mesh gauze, covered with an absorbent abdominal pad and secured with an elastic wrap. As per protocol. See over. Top dressings are removed on the first post-operative day. The mesh gauze is then allowed to dry onto the wound surface. This adherent dressing is gradually trimmed away as the underlying wound heals.

At SCCI, there has been a strong emphasis on incorporating pain management standards outlined by the Joint Commission on Accreditation for Healthcare Organizations. A numeric pain distress scale is utilized to assess the patient's level of pain and guide treatment. From clinical experience and a literature review, pain has been frequently identified as a significant problem when using fine-mesh gauze dressings for skin graft donor site management.

Of the many dressing options available, polyurethane foam dressings provide features that are ideal for promoting a protective wound healing environment. When the WOC nurse was consulted for treatment options for two patients experiencing particularly painful donor site wounds, a new foam dressing was prescribed: 3M Foam Adhesive Foam Dressing. This dressing is constructed with a soft, nonadherent polyurethane foam pad, an additional highly absorbent nonwoven layer, and a top layer of transparent adhesive film. The cases presented here illustrate the effectiveness of the new dressing in eliminating post-operative pain and providing an environment for healing.

Case Study #1

Patient referred to WOCN services for SGDS treatment recommendations when post-op pain, rated a "10+" on a 10-point scale, prevented participation in rehabilitation. Prescribed maximum pain medication dosage ineffective.

• First post-op day, foam dressing applied after careful removal of the mesh dressing. Patient reports an immediate reduction of pain, rating it "0" on the 10-point scale. (Figure 1a)

• Post-op day 6, dressing changed. Donor site wound bed epithelialized approximately 90% – 95%, no maceration of periwound skin noted. Pain rating “0”. Patient able to fully participate in therapies. (Figure 1b)

• One week later, dressing removed. Wound completely healed and patient discharged with recommendations to apply a protective coating of 3M Cavilon No Sting Barrier Film daily for approximately two weeks. (Figure 1c)

Throughout use of the new foam dressing, patient never required pain medication for donor site.

Figure 1a
First day post-op. SGDS located on right mid-thigh. Wound bed after careful removal of the Adaptic Xeroform gauze. 3M Foam Adhesive Dressing applied.

Figure 1b
On post-op day 6, 3M Foam Adhesive Dressing removed. Wound bed epithelialized approximately 90%-95%. No periwound skin maceration noted. A second 3M Foam Adhesive Dressing was applied.

Figure 1c
3M Foam Adhesive Dressing removed one week later. Complete healing.
Case Study #2

Following wide debridement and extensive excision of Squamous Cell CA, patient required complex wound management for 27 days and then underwent skin graft procedure. Due to the extent of the excised tumor wound, two separate SGDS were utilized.

- Left hip (smaller) donor site, measured 20 cm x 6.5 cm. 3M Foam Adhesive Dressing applied to facilitate comfort, rehabilitation and positioning. (Figure 2a)
- Post-op day 5, at first dressing change, wound approximately 70% epithelialized, no periwound skin maceration noted. Pain rating "0". Patient tolerated positioning onto site for care and therapies. (Figure 2b)
- Post-op day 7, SGDS treated with 3M Foam Adhesive Dressing essentially healed. To protect site and facilitate therapies, another foam dressing applied. (Figure 2c)
- Post-op day 12, 3M Foam Adhesive Dressing discontinued. (Figure 2d)
- Thigh (larger) site covered an extensive area limiting choice of post-op dressings. Standard protocol of impregnated fine-mesh gauze utilized. Patient rated pain for this site as "5 – 6" on the 10-point pain scale. (Figure 2e)
- For the duration of this adherent dressing, until complete healing the patient rated pain as "2 – 3". (Figure 2f)

Findings and Conclusion

In both cases, the adhesive film bordered foam dressing was effective in eliminating the post-operative pain of skin graft donor sites. In addition, the dressing provided an "ideal" environment that facilitated healing without maceration or other complications. Because of the comfort experienced with the foam dressings, both patients were able to participate fully in their post-operative therapies and activities. Our experience from these two cases has shown that the new 3M Foam Adhesive Dressing provides an effective, post-operative skin graft donor site dressing which is superior to our current practice.
References


7. Cadier, MA, Clarke, JA (1996), Dermasorb™ versus Jelonet™ in Patients with Burns and Skin Graft Donor sites, Journal of Burn Care and Rehabilitation, 17(3); 246-251.

* Post-operative protocol includes:
  • Adaptic X Xeroform Gauze Non-Adherent Dressing. A registered trademark of Johnson & Johnson Medical, Inc.
  • Kendall Curity® Abdominal Pad. A registered trademark of Tyco Healthcare Group LP.
  • Hartmann-Conco Compression Bandage