Clinical Problem: The goal of treating skin graft donor sites is to promote healing while minimizing the risk of introducing new complications and pain to already traumatized patients. An old and still practiced strategy is to cover the wound with petroleum (paraffin) gauze and allow it to dry out. Drying was accomplished, with the use of hair dryers, blankets (heat huggers), or air dryers. The procedure often resulted in pain and discomfort for the patient, and the dressing was needed to regularly trim the edges of the dressing as it peeled away from the healing wound. If not treated, the dressing could catch on clothing or linen, causing pain to the patient, trauma to the wound, and necessitating a repeat of the drying process. Essentially, the wound was left open to heal, which is contradictory to the best evidence-based practice of today, that of most wound healing.

In recent years, much has been published highlighting the benefits of moist environment dressings in treating donor sites. Moisture-retentive dressings that have been used include hydrocolloids, foams, and transparent thin film dressings, alone or in combination with absorbent materials such as alginates, hydrofibers, or gauze. While hydrocolloids and foams provide the needed absorbency, they must be removed whenever wound inspection is required, increasing treatment cost and the risk of traumatizing the wound. Thin film dressings allow for wound inspection, but usually fail to contain the drainage for more than 24 hours, even when used secondary to other absorbent dressings (which also mitigates the benefit of transparency).

A moisture-retentive, absorbent clear acrylic dressing has been introduced which combines the benefits of highly absorbent dressings such as hydrocolloids, foams, alginates and hydrofibers with the transparency of thin film dressings. Recent published data indicates that this dressing provides excellent results with skin donor sites.1,2

Methods

Twelve patients with skin donor wounds were recruited and enrolled in this case study series. The absorbent clear acrylic dressing was applied to donor sites post-operatively on POD-1 (and subsequently followed up for up to 21 days until dressing leakage, whichever came first). Wounds were evaluated for healing, leakage, and pain. Healing was noted when 90% of the surface had epithelialized, leakage was determined visually as drainage outside of the dressing enclosure. Pain was evaluated using a 10-point Likert scale. Case studies are presented for 3 of the enrolled patients and summary results are presented for all of the patients enrolled into the study.

Results

Twelve patients with 13 donor site wounds were enrolled into the study. Six patients were male and 6 were female. Average (SD) age was 50 (21) years.

One patient was still ongoing at the time of this report and 3 were discontinued for reasons unrelated to the study dressing. Wound healing occurred in 7 of the remaining 10 wounds by POD-21 within the 21-day follow up period. One of the 2 open wounds was healed 50% by POD-21, yet the other open wound was later determined to be a full thickness wound after the dressing was removed on POD-21.

In most cases (10/13 wounds), the dressings remained in place and functional until the wound healed or the patient was discontinued.

Average (SD) time to healing for the 7 wounds that healed was 14.3 (2.9) days.

Average (SD) dressing wear time for the 9 wounds that completed the study was 14.6 (3.7) days.

A 49-year-old male presented with a left lateral thigh measurared 10 x 15.5 cm with a depth of 0.010 inches. A transparent film dressing was used as the initial post surgical dressing. Wound drainage leaked from under the transparent film dressing on POD-1. The patient reported her pain to be 7/10 at the donor site during the first 24 hour post operative period. During 24 hour post operative period, application and transparent film dressing and cleansing of the donor site, the patient reported her pain to be 2/10. Following cleansing of wound, two 20 X 20.3 cm absorbent clear acrylic dressings (pad size 14.9 x 15.2 cm, #90805) were applied. The patient reported his pain level to be 0/10 immediately following dressing application.
The donor site on the left lateral thigh measured 12.5 x 15 cm with a depth of 0.010 inches. The initial post operative dressing was a layer of a hydrofiber, and a transparent film dressing. Wound drainage leaked under the transparent film dressing on POD-1. The patient reported her pain to be 2/10 at the donor site during the first 24 hour post operative period. During 24 hour post operative period, application and transparent film dressing and cleansing of the donor site, the patient reported her pain to be 0/10 immediately following dressing application.

The donor site on the anterior thigh measured 14 x 14 cm with a depth of 0.010 inches. A hydrofiber and a transparent film dressing were used as the initial post operative dressing. Wound drainage leaked under the transparent film dressing on POD-1. The patient reported her pain to be 4/10 immediately following dressing application.

The donor site on the anterior thigh measured 14 x 14 cm with a depth of 0.010 inches. A hydrofiber and a transparent film dressing were used as the initial post operative dressing. Wound drainage leaked under the transparent film dressing on POD-1. The patient reported her pain to be 4/10 immediately following dressing application.

Conclusions

The absorbent clear acrylic dressing allowed for monitoring of the donor site without unnecessary dressing change or disruption of the wound bed.

Wear time for the absorbent clear acrylic dressing exceeded our expectations, remaining functional until the wound was healed or the patient was discontinued.

The majority of patients reported a decrease in pain with use of an absorbent clear acrylic dressing on the donor site.

No additional adhesives or second dressing were needed to maintain dressing integrity.

In our experience with these highly draining wounds, the dressing should be applied such that the absorbent pad overlapped onto healthy skin approximately 2-4 inches.

Based on our experience, we recommend that the dressing be applied on POD-1 and stay in place until at least POD-14 and no later than POD-21. This is the general healing time most partial thickness donor sites. If patient’s age is over 65 years, longer wear time (up to POD-21) is recommended, as these patients generally require more time to heal.