Use of a Transparent Absorbent Acrylic Dressing* on a Stage II Pressure Ulcer of the Sacrum

Marie Brown-Etris, RN, CWOCN and Marian Punchello, LPN
Etris Associates, Inc., Philadelphia, PA, USA

Introduction

An essential component of a successful pressure ulcer treatment plan is selection of the proper dressing to manage wound drainage and provide a protective environment for wound healing. Selection of a dressing for use on sacral ulcers is a particular challenge. Body contours, friction, shear, and incontinence all contribute to early dressing failure. Hydrocolloid dressings have become a common dressing of choice for use on Stage II and III sacral ulcers because they adhere well and provide a protective, moisture retentive healing environment. While most hydrocolloid dressings have improved greatly in design and function since their initial introduction, they still have limitations which can vary by brand and formulation. The limitations include:

- Inability to visualize the wound and peri-wound skin through the dressing
- High edge profile of the non-bordered versions can catch on clothing/linen
- Limited conformability, especially after absorption
- Formation of a liquefied gel with unpleasant odor can leave residue in the wound and on the peri-wound skin

Recently, a dressing manufactured with a new absorbent technology and a novel design has been introduced to address the shortcomings of hydrocolloid dressings. The product consists of a clear, absorbent, acrylic polymer pad sandwiched between two layers of transparent polyurethane film. The dressing remains transparent upon absorption of wound fluid, making observation and monitoring of the wound possible without removal of the dressing. A case study is presented demonstrating the use of this new, highly conformable, transparent absorbent acrylic dressing in the management of a Stage II sacral pressure ulcer.

Case Study Synopsis

Patient Demographics: An 89-year old female presented with a three month history of a Stage II pressure ulcer located on the sacrum. Other significant medical problems included a right hip fracture s/p open reduction internal fixation (ORIF), history of rectal/colon cancer, gastroesophageal reflux disease (GERD), and neurogenic bladder (but was continent during the observation period). The patient had a Braden pressure ulcer risk assessment score of 21.†

Previous Ulcer Treatment: Previous ulcer treatment included pressure relief using a low-air-loss mattress overlay with a two hour turning schedule, and use of a hydrocolloid dressing.

Wound Characteristics: Initial ulcer size was 0.96 cm^2 with up to 50% necrotic tissue present (Figure 1). The wound exhibited a small amount of serosanguineous drainage.

Treatment Plan: Pressure relief was continued during the intervention phase of this case study but the ulcer dressing was changed to the transparent absorbent acrylic dressing. Both the oval and sacral dressing designs were used during the study period. Dressings were changed only when they met specific change criteria, which included leakage, edge roll, loss of adhesion, soiling, or the need for wound inspection.

Results: Mean dressing wear time was 7.6 days (range 7 to 9 days), and the ulcer healed in less than six weeks. There were no reports of adverse events, maceration, odor, residue, or of the dressing adhering to the wound bed. Dressing performance evaluations of absorbency, adhesion, wear time, barrier properties, ease of application, ease of removal, conformability (before and after absorption), patient comfort during wear and removal, and overall satisfaction were rated "very good" at all dressing changes. The ability to view the wound was rated "acceptable" to "very high" at all dressing changes. The value of transparency was rated "moderate" to "very high" at all dressing changes.

Conclusions

- The new transparent absorbent acrylic dressing adhered well to this difficult to treat sacral pressure ulcer, providing an average dressing wear time of 7.6 days (range 7 to 9 days).
- The new transparent absorbent acrylic dressing provided an excellent, moisture-retentive, protective wound healing environment, which facilitated wound debridement and allowed this three month old Stage II pressure ulcer to heal in less than six weeks of starting the new treatment plan.
- Transparency of the new absorbent acrylic dressing allowed for inspection of the wound without dressing removal. This new feature in absorptive wound dressings, allows for wound assessment with less disruption to the wound and patient.
- Transparency of the new absorbent acrylic dressing, coupled with a low profile transparent border, excellent absorption, and superior conformability, may also facilitate improved dressing wear time over traditional hydrocolloid dressings. Improved dressing wear time with fewer dressing changes may result in lower treatment costs with improved nursing productivity, patient comfort, and quality of life.
- The unique design of the new transparent absorbent acrylic dressing, exhibited no residue/melt-down into the wound and none of the characteristic odor which can result from microbial breakdown of hydrocolloid dressings.
- Both the oval and sacral designs of the new transparent absorbent acrylic dressing worked equally well on this sacral pressure ulcer.

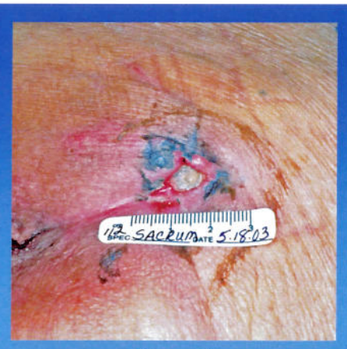

Figure 1
Initial Visit: Wound Size = 0.96 cm^2

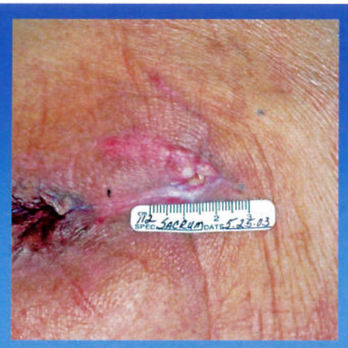

Figure 2
Week 1: Wound Size = 0.32 cm^2
66.7% reduction

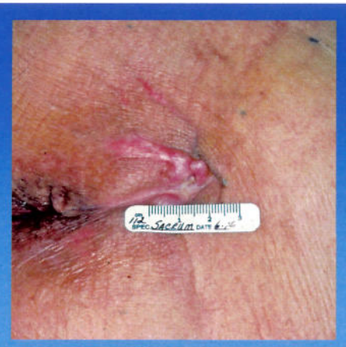

Figure 3
Week 4: Wound Size = 0.09 cm^2
90.6% reduction

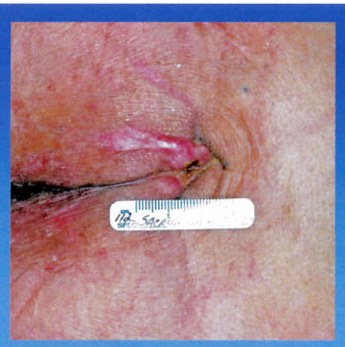

Figure 4
Week 5: Wound Closure

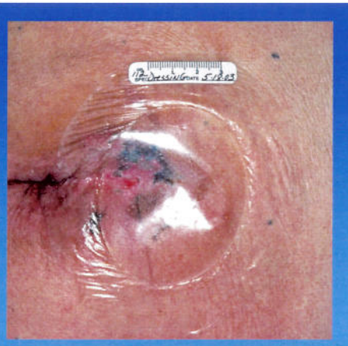

Figure 5
Oval Dressing Design

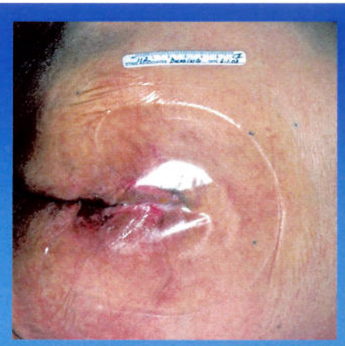

Figure 6
Sacral Dressing Design

*3M™ Tegaderm™ Absorbent Clear Acrylic Dressing, 3M Health Care, St. Paul, Minnesota

† Braden Scale for Predicting Pressure Sore Risk, Braden and Bergstrom copyright 1988

This study was supported by 3M Health Care