Initial Clinical Observations Using a Novel Negative Pressure Wound Therapy Drape Comprised of Acrylic and Silicone Adhesives

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Historically, V.A.C.® Therapy has used a drape containing acrylic adhesive (V.A.C.® Drape) to cover foam dressings in the wound bed. To offer an alternative to the existing acrylic drape, an innovative film comprised of silicone and acrylic adhesives **(V.A.C. DERMATAC™ Drape; Figure 1)** has been developed with ease-of-use and patient comfort in mind. A user evaluation was performed for V.A.C. DERMATAC™ Drape to assess for ease of application, seal performance with V.A.C.® Therapy, skin integrity, and patient comfort.

Drape applications using V.A.C.® Therapy at -125 mmHg were administered on 7 female and 10 male patients (n=17) in Chile at 2 hospitals (Hospital San Juan de Dios and Hospital Sotero Del Rio) over a 2-week period during April of 2018 **(Table 1)**. Wound types included diabetic foot ulcers, pressure ulcers, and abdominal wounds **(Table 1).** Drapes were applied in one case on a wound that had been covered with a split-thickness graft. A total of 53 drape applications were performed **(Table 2)**, and drapes were changed every 48-72 hours.

TABLE 1. PATIENT DEMOGRAPHICS AND WOUND TYPES

Characteristics	Population N=17
Age (years)	
Mean ± Standard Deviation	52.5 ± 17
Sex, n (%)	
Male	10 (58.8)
Female	7 (41.2)
Wound Type, n (%)	
Diabetic foot ulcer	4 (23.5)
Split-thickness skin graft	1 (5.9)
Pressure ulcer	6 (35.3)
Abdominal wound	5 (29.4)
Surgical wound	1 (5.9)

Figure 1. V.A.C.® Therapy dressing kit (left) containing V.A.C. DERMATAC™ Drape (right).

TABLE 2. NUMBER OF DRESSING APPLICATIONS

Dressing Applications, n (%)	Overall N=53
Week 1	24 (45.3)
Week 2	29 (54.7)

The mean age of patients in this user evaluation was 52.5 ± 17 years. Negative pressure was achieved 100% of the time upon application at each dressing change. During the first week, 15 of 24 (62.5%) drapes maintained a seal for 48 hours without reinforcement; however, after further training of healthcare professionals (HCPs), this percentage increased to 25/29 (86.2%) during week 2. There were no signs of maceration or skin irritation reported, and 100% of the patients claimed no pain upon drape removal based on verbal feedback **(Table 3).** Representative cases are shown in **Figures 2-4.**

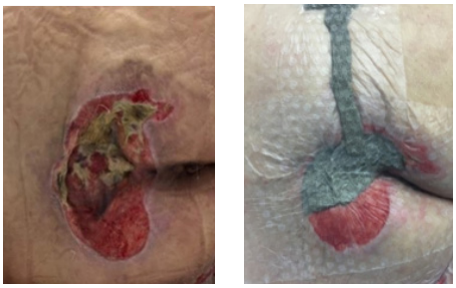

Figure 2. Sacral pressure ulcer. Wound before application of NPWT (left). Application of NPWT using the hybrid drape (right). Photos courtesy of Marjorie Guzman, Hospital San Juan de Dios.

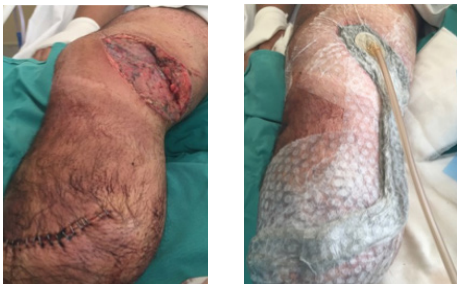

Figure 3. Below-knee amputation and wound above knee. Wound before application of NPWT (left). Application of NPWT using hybrid drape (right). Photos courtesy of Marjorie Guzman, Hospital San Juan de Dios.

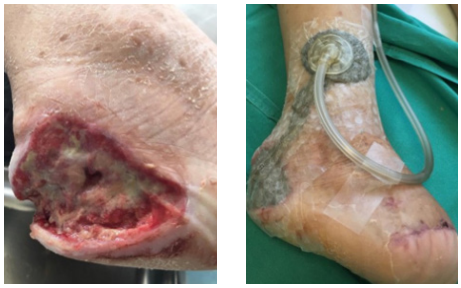

Figure 4. Diabetic foot ulcer. Wound application of NPWT (left). Application of NPWT using hybrid drape (right). Photos courtesy of Marjorie Guzman, Hospital San Juan de Dios.

TABLE 3. DRAPE PERFORMANCE AND OBSERVATIONS RELATED TO APPLICATION AND/OR REMOVAL OF DRAPE

	N (%)
Drape Performance Negative pressure achieved at each initial application without reinforcement	53 (100%)
Skin Integrity Maceration Signs of irritation	 0 (0%) 0 (0%)
Patient Comfort Level Patient-reported pain at dressing change	0 (0%)

CONCLUSIONS

Data from this initial evaluation suggest that the use of V.A.C. DERMATAC™ Drape provides adhesion to maintain a seal yet is gentle upon removal during dressing changes, thereby potentially improving the HCP and patient experience when undergoing NPWT. The ability to lift and reapply the drape during the initial placement may also help facilitate application by HCPs.

NOTE: As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

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