Introduction

- Up to 3/1000 people are estimated to have leg ulcers with prevalence increasing to 20/1000 for people >80 years old.¹
- These lower extremity wounds are often chronic, highly exudative, and associated with venous insufficiency.
- Management of these wounds involves advanced wound dressings designed to absorb large amounts of wound exudate and compression therapy.

Purpose

• The use of advanced wound dressings, super-absorbent secondary dressings, and two-layer compression in 7 patients with lower extremity wounds is presented.

Methods

- Wounds were assessed and managed with:
- advanced wound dressings (oxidized regenerated cellulose [ORC]/collagen/silver-ORC* or hydrofiber with silver dressings[†])
- Super-absorbent dressings[‡]
- Two-layer compression wrap§
- Dressing changes occurred 1-2 times per week, depending on the level of exudate present.
- One patient received an advanced elastomeric skin protectant** prior to dressing and compression applicaton.

Results

- Seven patients presented for care (age range 41-88 years).
- Wound types included venous leg ulcer (VLU), skin breakdown, fluid overload ulcer, vasculitis, and traumatic ulcer (Table 1).
- Previous medical history included diabetes, venous insufficiency, and congestive heart failure (**Table 1**).
- Representative cases shown in Figures 1-4.

Presented at Symposium on Advanced Wound Care Spring/ Wound Healing Society, April 30- May 4, 2025, Grapevine, TX.

NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. Rx only.

Super-Absorbent Dressings and Two-Layer Compression Wrap Use in the Management of Lower Extremity Wounds Emily Greenstein, APRN, CNP, CWON-AP, FACCWS

Fargo, ND

Representative Cases

Traumatic Ulcer. A 65-year-old male presented with a traumatic **VLU**. A 41-year-old male presented with a VLU of the right leg. Medical history included venous insufficiency and previous ulcer on the right shin. Medical history included diabetes, phlebectomy of the left leg. Advanced skin protectant was utilized peripheral artery disease, edema, and a previous chemical burn. to protect the periwound skin.



Figure 1A. At Figure 1B. Day presentation (8.0 x 6.0 x 0.1cm³)



14 (6.0 x 3.5 x 0.1 cm³)



Figure 1C. Day 28 (4.5 x 1.0 x 0.1 cm^{3}



Figure 1D. Day 42; fully healed

VLU. A 72-year-old male presented with a VLU of the right Fluid overload ulcer. A 59-year-old male presented for care leg. Medical history included diabetes, venous insufficiency, after noticed blistering to the left lower leg after a 20 lb fluid gain. Medical history included chronic obstructive pulmonary disease gastric bypass, and congestive heart failure. and congestive heart failure.





Figure 3A. Intact Figure 3B. Day 7; Figure 3C. Day Figure 3D. Day blister (2 x 7 cm²) Open wound (3.3 14 ($1.5 \times 2.0 \times 0.1$ 21; dried over x 3 x 0.1 cm²)



cm³)



*3M[™] Promogran Prisma[™] Collagen Matrix with ORC and Sllver; [†]3M[™] Kerracel[™] Ag Gelling Fiber Dressing; [‡]3M[™] Kerramax Care[™] Super-Absorbent Dressing; [§]3M[™] Coban[™] 2-Layer Compression System; **3M[™] Cavilon[™] Advanced Skin Protectant (Solventum Corporation, Maplewood, MN).



Figure 2A. At presentation (3.7 x 1.1 x 0.2 cm³)



Figure 2B. Day 14 (2.9 x 0.7 x 0.2 cm^{3}



28 (1.6 x 0.4 x 0.1 46; fully healed cm³)



Figure 2C. Day Figure 2D. Day



4A. Figure presentation (3.0 x $1.5 \times 0.1 \text{ cm}^3$)



Figure 4B. Day 7 (2.0 $x 1.0 \times 0.1 \text{ cm}^3$)



Figure 4C. Day 21 $(0.2 \times 0.2 \times 0.1 \text{ cm}^3)$

Results (Cont'd)

 Table 1. Patient demographics

Characteristic	n=7
Age (years ± SD)	65.1 ± 14.1
Comorbidity	
Diabetes	4 (57.1%)
Venous Insufficiency	3 (42.8%)
Congestive Heart Failure	2 (28.6%)
Lymphedema/Edema	2 (28.6%)
COPD	1 (14.3%)
GSV Ablation	1 (14.3%)
PAD	1 (14.3%)
Obesity	1 (14.3%)
Wound Types	x ž
VLU	3 (42.8%)
Skin Breakdown Secondary to Blistering	1 (14.3%)
Fluid Overload Ulcer	1 (14.3%)
Vasculitis	1 (14.3%)
Traumatic Ulcer	1 (14.3%)

COPD= Chronic obstructive pulmonary disease; GSV= Great saphenous vein; SD= standard deviation; PAD= Peripheral artery disease; VLU= venous leg ulcer

- Increased granulaton tissue development and reduction of wound area and exudate volume were observed in 4 patients after treatment for 14-28 days, followed by complete healing within 46 days of presentation.
- Granulation tissue development and decreased slough were observed in the wound bed of the remaining patients.
- In these 3 patients, hydrofiber with silver dressings and superabsorbent secondary dressing use was continued.

Conclusions

- Use of advanced wound dressings, super-absorbent dressings and two-layer compression wrap resulted in complete wound healing in 4 patients.
- This wound management plan contributed to increased granulation tissue development and reduced slough observed in the remaining patients.

References

I. Nelson EA, Adderly U. Venous leg ulcers. BMJ Clin Evid. 2016;01:1902:1-36.

The author thanks Solventum for assistance with poster preparation and production.

E Greenstein is a paid consultant for Solventum