

Case Studies to Evaluate the Performance of Superabsorbent Dressings Combined with Cohesive Two-Layer Compression Bandages for Treating Highly Exuding VLUs

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Introduction

- Chronic, highly exuding wounds negatively impact patient quality of life. Patients frequently experience negative emotions such as shame, embarrassment, and loneliness.
- Excess fluid makes achieving an optimum moisture balance challenging and can lead to maceration.
- Managing highly exuding venous leg ulcers (VLUs) has the additional challenge of absorbing and maintaining exudate in the dressing while compression is in place.

Purpose

- The objective of this study was to determine clinical outcomes, and patient-reported benefits of KC superabsorbent dressings (KC-SAD*) for the care of highly exuding VLUs compared to standard of care superabsorbent dressings (SOC-SAD) in combination with cohesive two-layer compression (C2LC[†]).

Methods

- Patients with highly exuding VLUs that received 2 weeks of SOC-SAD + C2LC followed by 4 weeks care with KC-SAD + C2LC were included (**Figure 1**).
- The primary objective was to determine first insights in quality of care improvement benefit.
- The secondary objective was to estimate the impact on cost of care, based on case study resource consumption and outcomes.
- Assessments were performed at baseline, per care period, and per bandage change.
- The Health Economics scenario was based on material consumptions, frequency of care, and wound closure rate.

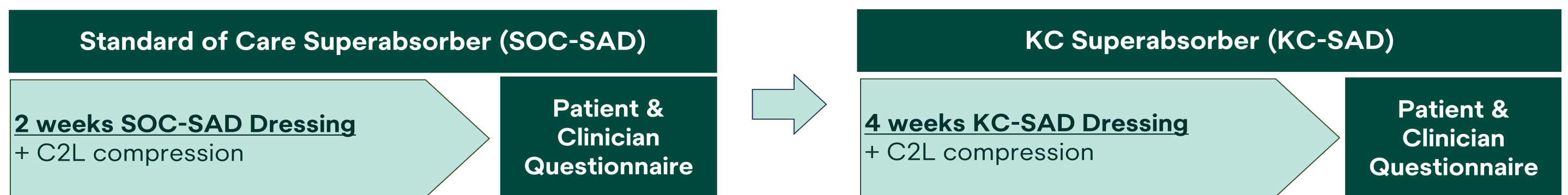


Figure 1. Approach for Quality Improvement Evaluation

Results

- 10 elderly patients suffering from non-healing (mean VLU age: 38.5 month), highly exuding VLUs were included, and received an average 2.6 dressing changes/week (**Table 1**).
- During the first 2 weeks of care with SOC-SAD, 1 patient refused to continue any compression therapy. This patient never received KC-SAD + C2LC treatment.
- Care Outcomes (Table 2):**
 - Mean frequency of visits was slightly reduced from 2.04/week with SOC-SAD to 1.8/week with KC-SAD.
 - Dressing sizes were reduced in line with VLU size reduction, maintaining the dressing saturation at the same levels (0.45-0.46 g/cm², p=0.76418).
 - With KC-SAD, the frequency and severity of exudate leakage was significantly reduced by 73% (p<0.0001).
 - Dressing leakage within the bandage or strike-through was observed in 89% of SOC-SAD applications at mean wear time of 3.4 days while 22% of KC-SAD applications demonstrated dressing leakage at mean wear time of 3.9 days.

Results (Cont'd)

Care Outcomes Cont'd (Table 2):

- 50% (5/10) of wounds treated with SOC-SAD + C2LC had no or only minor clinical improvements, while positive healing progression was observed in 100% (9/9) of wounds treated with KC-SAD + C2LC (**Figure 2**).
- 50% (5/10) of wounds closed >95% during KC-SAD + C2LC.
- KC-SAD reduced the frequency of severe and moderate exudate leakage per application by 73% compared to SOC-SAD.
- 56% (5/9) of non-healing wounds progressed within 4 weeks of KC-SAD to wound healing (97-100% closed).
- No C2LC bandage slippage was observed.

Cost Outcomes (Table 3):

- Cost estimates based on material and resource consumption resulted in 13% weekly cost of care savings.
- 51% reduction in total cost of care for highly exuding VLUs is estimated including the clinical outcomes with KC-SAD + C2LC in UK out-of-hospital setting observed in this case series.

Results (Cont'd)

Patient-Reported Outcomes:

- During baseline care, patients reported quality of life implications due to VLUs, especially related to limitations of clothing choices and discomfort due to smell. All patients suffered always or often from reduced mobility due to heavy bandages and feel isolated (**Figure 3**).
- Patients preferred KC-SAD + C2LC, and consistently reported improvements with newly implemented superabsorbent dressing in all aspects of comfort.
- KC-SAD + C2LC treatment resulted in enhanced comfort, less exudate strike-through and leakage, and a reduction in heat and moisture under the bandage. Dressing- and compression-related pain and itching was reduced when using KC-SAD + C2LC (**Figure 4**).

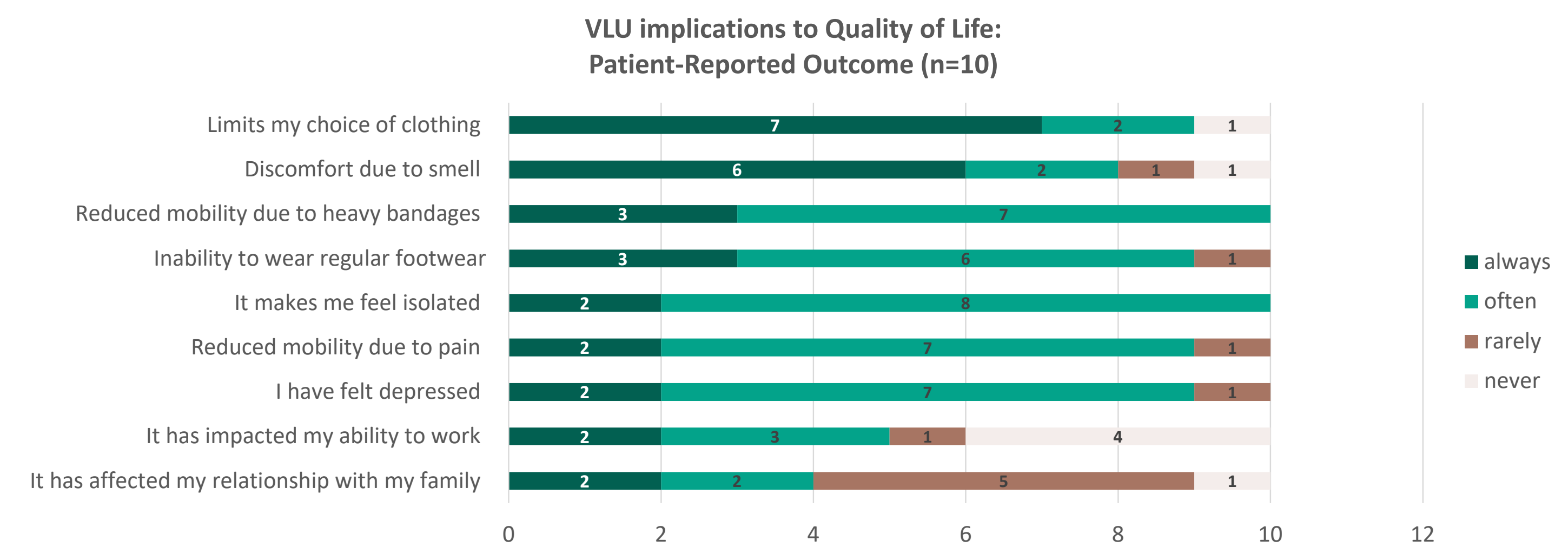


Figure 3. During Baseline Care, Patient-Reported Quality of Life is Highly Impacted due to VLU

		Worsening				Improving			
Patient-Reported Outcomes		N	-3	-2	-1	0	1	2	3
Was the dressing and bandage comfortable ?	8						6	2	
Did the dressing feel wet under the bandage?	9						1	4	4
Did your leg feel hot and sweaty ?	9						3	4	2
Did you experience any form of itching under the dressing?	9					1	2	6	
Did you experience pain in the last two weeks while your dressing and bandage were in place?	9						3	3	3
Did your leg feel heavy with your dressing and bandages in place?	9						2	7	
Did you see leakage through your dressings in between clinic appointment?	9						2	5	2
Did the compression bandage stay in place ?	8						7	1	
Did you feel any relief in pain or swelling with the compression bandage?	8					1	4	3	

Figure 4. Change in Patient-Reported Outcomes with Dressing Change

Conclusions

- Wound edge maceration and wound healing outcomes improved with the use of KC-SAD in combination with C2LC.
- Further, patients noted improvements in quality of life with use of the newly implemented KC-SAD + C2LC.
- Larger studies are required to confirm these improved outcomes.

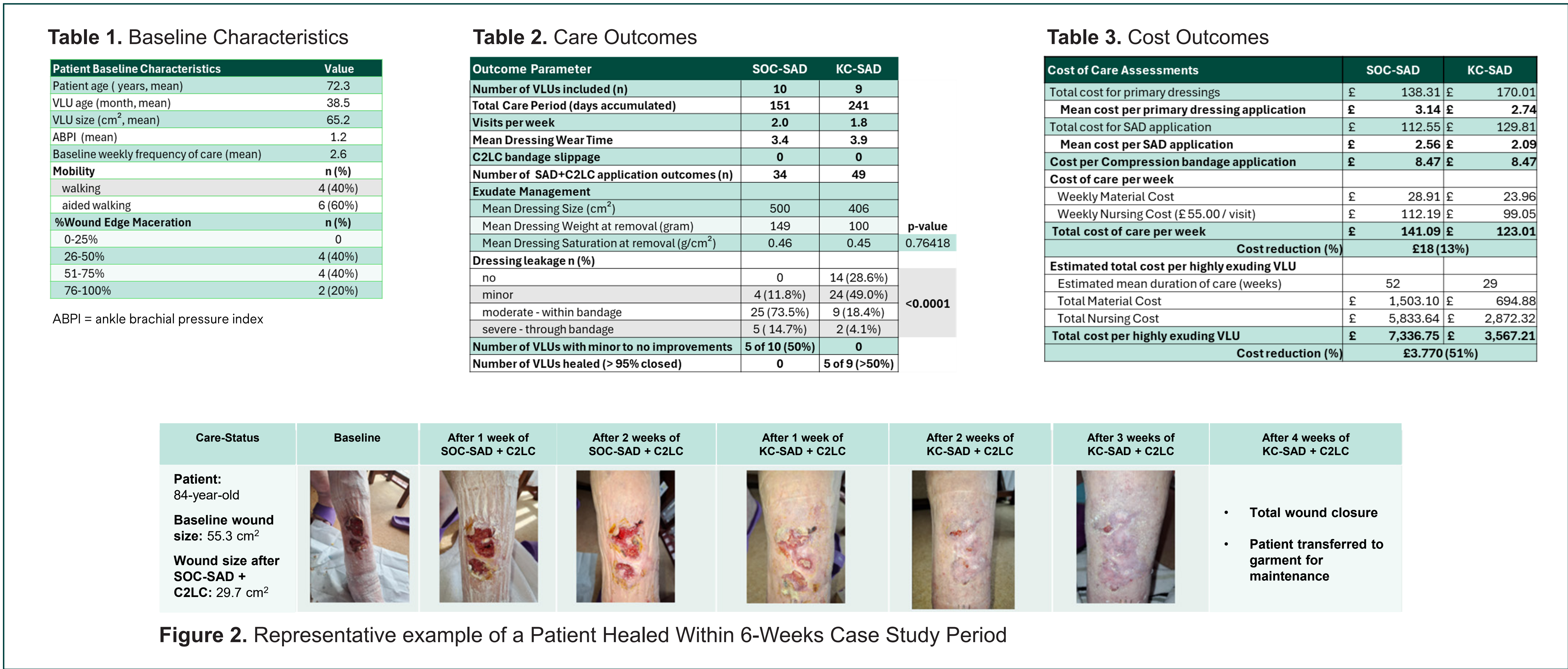


Figure 2. Representative example of a Patient Healed Within 6-Weeks Case Study Period

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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.

*Solventum™ Kerramax Care™ Super-Absorbent Dressing; †Solventum™ Coban™ 2 Two-Layer Compression System (Solventum Corporation, Maplewood MN, USA)

Christine Bongards and Leah Griffin are employees of Solventum. Laura Paterson is a paid consultant for Solventum.