

# Case Study to Evaluate Clinical Performance of Cohesive 2 Layer Compression in Combination with Superabsorbent Dressings for the Treatment of Highly Exuding Venous Leg Ulcers

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## Introduction

Chronic, highly exudating wounds are difficult for both clinician and patient. Patients with highly exuding venous leg ulcers (VLUs) experience a negative impact on quality of life.

## Purpose

Determine clinical outcomes, patient-reported outcomes, and clinician preference of a cohesive two-layer compression system (C2LC\*) in combination with a superabsorbent dressing (KC-SAD)<sup>†</sup> for treatment of highly exuding VLUs.

## Methods

- Patients with highly exuding VLUs and a history of compression care were recruited from 3 different wound clinic sites.
- The C2LC system in combination with KC-SAD was implemented and assessed over a minimum of 3 weeks (**Figure 1**).
- Clinical parameters including wound healing, circumference measurements to evaluate edema, dressing leakage, bandage slippage, and frequency of visits were assessed.
- Patient-reported outcomes and clinician satisfaction were evaluated before and after implementation of C2LC.



**Figure 1.** C2LC application over KC-SAD

## Results

### Baseline and VLU impact on Patient

- 12** patients suffering from **non-healing, highly exuding VLUs** (with mean wound age of 10 months and a mean bandage change frequency history of 2.6 per week) were included (**Table 1**).

**Table 1.** Baseline characteristics

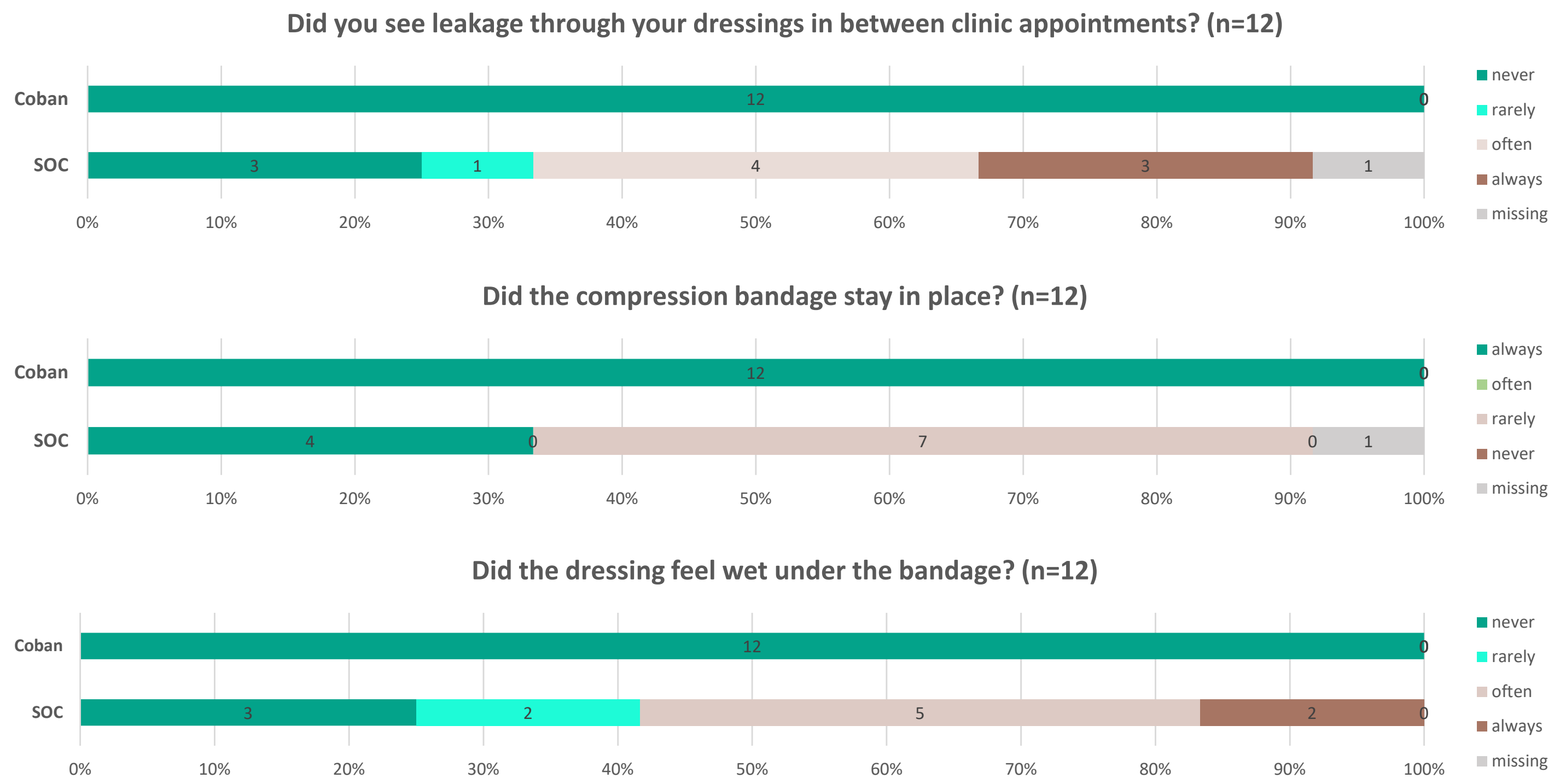
Baseline Characteristics	Value
Patient age ( years, mean)	74.9
Male Gender (%)	30
Smoker (%)	25
Body Mass Index (kg/m <sup>2</sup> , mean)	35
Ankle-Brachial Pressure Index (mean)	1.1
Venous Leg Ulcer Age (month, mean)	10
Baseline weekly frequency of care (mean)	2.6

### Patient-Reported Outcomes

- Patients reported **quality of life (QoL) to be impacted by VLU** due to pain, heavy bandages, limitations in clothing and footwear, smell, and discomfort (**Table 2**).
- Post implementation of C2LC, patients never experienced slippage, leakage, or wet sensation under the bandage (**Figure 2**), with all patients reporting a strong overall preference towards the C2LC system (**Table 3**).

**Table 2.** Patient-reported QoL impacted by VLU

Quality of Life Measures	N	never	rarely	often	always
Limits my <b>choice of clothing</b>	12			4	8
Discomfort due to <b>smell</b>	12		1	3	8
Inability to wear regular <b>foot-wear</b>	12			3	9
Reduced mobility due to <b>pain</b>	12			2	10
Reduced mobility due to <b>heavy bandages</b>	12			3	9
It makes me feel <b>isolated</b>	12			3	9
I have felt <b>depressed</b>	12		1	2	9
It has impacted my <b>ability to work</b>	7		1		6
It has affected my <b>relationship with my family</b>	9			5	4



**Figure 2.** Patient-reported outcomes

**Table 3.** Overall patient satisfaction

	Prefer SOC										Prefer C2LC
Overall Patient Satisfaction with C2LC + KC-SAD	0	1	2	3	4	5	6	7	8	9	10
Frequency of Score:								1	1	1	9

## Results (Cont'd)

- With C2LC compression system (**Table 4**):
  - 83%** of patients benefited from **reduced pain**, and reported **less leg heat and sweat**.
  - 75%** of patients described **reduced swelling, wet sensation, and itching**.
  - 67%** of patients reported great **improvements in heavy leg symptoms**.
  - 63%** of patients noticed strong improvements for **compression staying in place**.
  - 58%** of patients reported improvements in **comfort**.

**Table 4.** Patient preference assessment

Patient-Reported Outcomes	Worsening			Improving				
	N	-3	-2	-1	0	1	2	3
Was the dressing and bandage <b>comfortable</b> ?	12				5	1	6	
Did the dressing feel <b>wet</b> under the bandage?	12				3	2	5	2
Did your leg feel <b>hot</b> and <b>sweaty</b> ?	12			1	1	5	4	1
Did you experience any form of <b>itching</b> under the dressing?	12				3	3	5	1
Did you experience <b>pain</b> in the last two weeks while your dressing and bandage were in place?	12		1		1	4	3	3
Did your leg feel <b>heavy</b> with your dressing and bandages in place?	12			1	3		3	5
Did you see <b>leakage</b> through your dressings in between clinic appointment?	11				3	1	4	3
Did the compression bandage <b>stay in place</b> ?	11				4		7	
Did you feel any <b>relief in pain</b> or <b>swelling</b> with the compression bandage?	12				3	2	5	2

### Clinical Outcome

- With C2LC, the **dressing change frequency was reduced** from 2-3 visits per week with baseline SOC to once per week (**Table 5**).
- C2LC **stayed in place** until next scheduled appointment with **no strikethrough** of exudate through the bandage observed (**Table 5**).
- All patients demonstrated **improvements in leg edema**, with reduced mean ankle circumference within 2 weeks (**Table 5**).
- Within 2-4 weeks, **3 VLUs closed (25%)** (**Table 5**).
- 9 VLUs required continued care, with **patients expressing a strong preference for the continuation with C2LC**.
- All clinicians reported C2LC as the preferred compression system and highlighted the **ease of application**.
- C2LC compression provided effective edema management for challenging highly exuding wounds (**Figure 3**).
- Patients benefited from a more comfortable compression system that remained in place without leakage.

## Results (Cont'd)

**Table 5.** Care outcomes

	Treatment Weeks				
Patient Status	Baseline	Week 1	Week 2	Week 3	Week 4
Ongoing Wound Care	12 (100%)	12 (100%)	11 (92%)	9 (75%)	2 (17%)
Healed Wounds			1 (8%)	2 (17%)	3 (25%)
Discharged				1 (8%)	7 (58%)
Slippage	Baseline	Week 1	Week 2	Week 3	Week 4
No	11 (92%)	10 (83%)	10 (83%)	8 (80%)	4 (100%)
Yes	1 (8%)				
Not Provided / Not Applicable		2 (17%)	2 (17%)	2 (20%)	
Exudate Leakage	Baseline	Week 1	Week 2	Week 3	Week 4
No			1 (8%)	4 (40%)	2 (50%)
Minor	3 (25%)	3 (25%)	5 (42%)	2 (20%)	1 (25%)
Moderate, within bandage	4 (33%)	9 (75%)	6 (50%)	4 (40%)	1 (25%)
Severe, through bandage	5 (42%)				
Wound Edge Maceration	Baseline	Week 1	Week 2	Week 3	Week 4
Not provided / Not Applicable	3 (25%)	3 (25%)	3 (25%)	4 (40%)	2 (50%)
0-25 %	1 (8%)			1 (10%)	2 (50%)
26-50 %		2 (17%)	4 (33%)	5 (5%)	
51-75 %		1 (8%)	5 (42%)		
76-100 %	8 (67%)	6 (50%)			
Granulation	Baseline	Week 1	Week 2	Week 3	Week 4
Not provided / Not Applicable	2 (17%)	1 (8%)	1 (8%)	2 (20%)	
0-25 %	9 (75%)	6			
26-50 %	1 (8%)	4	7	1 (10%)	
51-75 %		1 (8%)	1 (8%)	4 (40%)	1 (25%)
76-100 %			3	3 (30%)	3 (75%)
Edema Measurements	Baseline	Week 1	Week 2	Week 3	Week 4
Ankle circumference (mean, cm)	29.3	27.1	25.1	24.2	23.4
Calf circumference (mean, cm)	50.5	48.7	45	42.5	44



**Figure 3.** Representative cases

## Conclusions

In these patients, the tissue viability nursing team noted improved clinical outcomes, ease of application, and improved patient acceptance when C2LC and KC-SAD were applied.