

# Case study: Mixed aetiology leg ulcers

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## KEY POINTS

- ▶ A patient with a palliative diagnosis of primary cancer of the bladder was referred with three static pre-tibial leg ulcers of mixed aetiology
- ▶ The patient's oncologist was concerned amputation would be needed if healing did not progress
- ▶ The Avelle<sup>TM</sup> System Negative Pressure Wound Therapy (NPWT) was used to kick start healing
- ▶ The patient was delighted with the rapid progress of wound healing using the Avelle<sup>TM</sup> System, allaying his amputation fears
- ▶ The wounds' progress allowed the Avelle<sup>TM</sup> System to be stepped-down to wound management using AQUACEL<sup>®</sup> Foam dressing to protect the fragile new tissue.

## THE PATIENT

A 63-year-old male with a palliative diagnosis of primary cancer of the bladder presented with three static pre-tibial leg ulcers of mixed aetiology on his lower limb. The patient's oncologist was concerned that, given the patient's overall poor health, if the wounds did not start to improve, the patient may be at risk of amputation. The patient was being managed in his own home.

## THE WOUND

On initial assessment, the largest of the 3 wounds measured approximately 1.5cm x 1.0cm x 0.2cm deep. The wound beds consisted of approximately 60% granulation tissue and 40% slough, and were producing a moderate volume of exudate. The peri-wound skin was intact and of normal appearance (**Figure 1**).

The wounds were being managed using honey, with an absorbent dressing pad as a secondary dressing\*. Wadding and crepe layer bandaging\*\* were applied over the top. Despite this regimen the wounds were static. Dressing changes were needed every 3–5 days. The patient reported a moderate amount of wound-related pain, rating it as a '6' on a scale of 0–10 (where 0 = no pain, 5 = moderate pain and 10 = worst pain possible).



FIGURE 1 - Wounds on day 1

## MANAGEMENT

The wounds were irrigated using wound cleanser<sup>∞</sup>, then the Avelle<sup>TM</sup> System was started, using a 16cm x 16cm the Avelle<sup>TM</sup> System dressing. The dressing and the Avelle<sup>TM</sup> System pump were easy to apply and a good seal was obtained (**Figure 2**).



FIGURE 2 – Avelle<sup>TM</sup> Dressing in situ delivering negative pressure

### WOUND PROGRESSION

- Day 3** 1.3cm x 0.8cm x 0.1 cm  
80% granulation tissue
- Day 8** 1.2cm x 0.6cm x 0.1 cm  
100% granulation tissue (**Figure 3**)
- Day 11** 0.9cm x 0.6cm x 0.1 cm  
100% granulation tissue. NPWT stopped.
- Day 15** NPWT resumed due to wound deterioration.
- Day 22** Epithelial tissue present  
A total of 7 dressing dressings were used.
- Day 29** NPWT stopped (**Figure 4**)

Throughout therapy, the patient reported a reduction in pain, and was delighted to see such rapid improvement, which then impacted on his fears around possible amputation.



**FIGURE 3 –**  
Wounds on day 8



**FIGURE 4 – Wounds on day 29. NPWT stopped**

### DISCUSSION

The Avelle™ System was successful in getting the patient's wounds back on a healing trajectory, reducing them in size until NPWT could confidently be stopped and AQUACEL® Foam dressing applied.

One pump was needed for a total of 29 days. This included 26 days of NPWT, and a break in therapy for 3 days; providing cost effective disposable NPWT.

Throughout the evaluation, the peri-wound skin remained healthy, the dressing was easily removed, and there was no visible skin damage caused by the Avelle™ System, dressings or adhesive strips.

Wound exudate was handled well by the Avelle™ System Dressing, another factor contributing to the peri-wound condition.

Of great importance, the patient could receive care in his own home and was delighted with the rapid progress of wound progression using the Avelle™ System.

### COST OF THE AVELLE™ SYSTEM

<b>Avelle™ Pump</b>	<b>£99</b>
Number used :	1
Cost per pump:	£99
<b>Avelle™ Dressings</b>	<b>£150</b>
Number used:	7
Cost per box of 5:	£75
<b>Total cost</b> 26 days NPWT delivered over 29 days	<b>£249</b>
<i>Prices as per October Drug Tariff 2017.</i>	

### CONCLUDING POINTS

- ▶ The Avelle™ System **reduced wound size by 95%** in 22 days
- ▶ One wound showed signs of epithelial tissue by day 22
- ▶ Patient reported a decrease in pain levels throughout therapy (from 6 to 0)
- ▶ Dressing changes were unproblematic and a good seal was maintained
- ▶ Significant benefits for the well-being of the patient
- ▶ Excellent fluid handling with the Avelle™ System
- ▶ The 30-day pump lifespan allowed for a break in NPWT without the need to purchase a new pump

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\*Medihoney® (DermaSciences)

Zetuvit® (Hartmann)

\*\* K-soft wadding, Urgo K2 Lite (Urgo Medical)

∞prontosan

† Biatain® Silicone (Coloplast)

The Avelle™ Pump is battery powered. Each pump is provided with 2 sets of AAA batteries to power the pump for the duration of its lifespan.

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The Avelle™ Pump and Dressings were provided free of charge for this case study.