Use of an Innovative Gellable Fiber Dressing Technology in Heavily Exudating Venous Leg Wounds: A Case Series

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Introduction

- Chronic venous insufficiency is the 7th most common chronic disease and is the underlying cause of 95% of leg ulcers[1].
- Venous leg ulcers (VLUs) are difficult to treat and even with proper care can take a minimum of 12 weeks to heal[2].
- One reason VLUs are a clinical challenge is that they are notoriously heavily draining wounds.
- This drainage contributes to the formation of a significant amount of bioburden, devitalized tissue, proteinaceous exudates, spent white blood cells, and microorganisms, all which prolong wound healing.
- Exudate management, maintaining a moist wound environment, protecting the peri-wound area, reducing edema, and optimizing wound healing are imperative for successful outcomes when treating VLUs.

Methods

- An observational case study was conducted in an outpatient wound care setting and consisted of five patients with heavily draining VLUs.
- At the clinicians' discretion, following appropriate wound bed preparation, an innovative gellable fiber dressing* was applied to the wound/peri-wound.
- The innovative dressing's proprietary design offers the optimal balance between absorptive capacity and structural integrity.
- This high performance gellable fiber dressing is designed to pull exudate away from the wound by absorbing throughout the entire dressing to preserve optimal moisture and protect healthy skin.
- The innovative gellable fiber dressing can absorb 296% of its weight[3].
- Two-layer compression† was utilized on top of the dressing.
- The wounds were examined on a weekly basis for wound size, wound tissue appearance, exudate amount, odor, and quality of the peri-wound skin.

Case Example 1

HISTORY

- 57 y.o. Male with a 5-month history of VLU on the left posterior calf.
- Alginate was previously used as a primary dressing, but excessive adherence to the wound tissues necessitated choosing an alternative primary dressing.
- After clinical evaluation, the gellable fiber dressing was applied as the primary with Two-Layer compression as secondary dressing and compression. Both changed weekly.

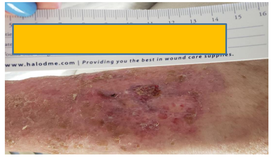
Baseline

- Base has a mix of fibrosis and granulation.
- Moderate serosanguineous drainage.
- Measurements: 4.0cm x 2.5cm x 0.1cm
- No malodor VAS score: 7

Visit 2

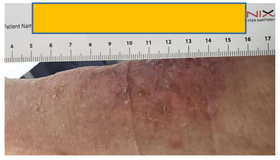
- Upon bandage removal there was no adhesion to the wound tissues noted. No evidence of maceration or complications.
- Moderate serosanginous drainage noted on dressing.
- Measurements: 3.7cm x 2.2cm x 0.1cm
- VAS score: 4

Visit 4



- Wound continued to make weekly progress.
- Measurements: 1.3cm x0.9cmx0.1cm
- Exudate was minimal. VAS Score: 3

Visit 8



- VLU was noted to be completely resolved after 7 weeks of this wound care regimen.

Case Example 2

HISTORY

- 76 y.o. Female with >12-month history of VLU on the medial left ankle.
- Previous therapies included alginate, collagen, foam and ace wraps without significant healing noted.
- After clinical evaluation, the gellable fiber dressing was applied as the primary with Two-Layer compression as secondary dressing and compression. Both changed weekly.

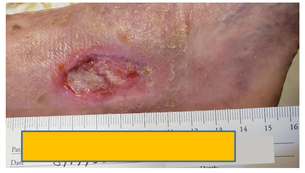
Baseline

- Base of wound mix of slough and fibrosis.
- Moderate serosanguineous exudate.
- Measurement: 4.7cm x 2.3cm x 0.4cm
- Slight malodor VAS score: 8

Visit 3

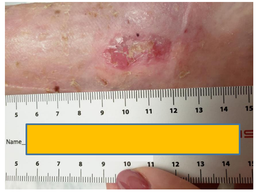
- Half the wound has new epithelial coverage.
- Far less exudate.
- Measurements: 3.6cm x 1.9cm x 0.2cm
- No malodor VAS score: 3

Visit 5



- Wound continues to progress with weekly wound care visits and bandage changes.
- No adverse events or reported patient discomfort.
- Measurements: 2.0cm x 1.6cm x0.1cm

Visit 7



- VLU was noted to be completely resolved after 6 weeks of this wound care regimen.

Conclusion

- VLUs can be challenging to treat and often have prolonged healing times.
- Chronic VLUs result in reduced mobility, significant financial implications, and poor quality of life.
- There are no uniform therapies for management of VLUs.
- By using this innovative gellable fiber wound dressing in conjunction with multilayer compression wrap therapy, we were able to facilitate healing in all 5 patients.
- The gellable fiber dressing remained intact, did not adhere to the wound bed, and managed the excess exudate resulting in optimized healing in this patient cohort.
- No adverse reactions were noted.

Investigational Product

*AGLIE, Milliken Healthcare Products, LLC, Spartanburg, SC
†CoFlex TLC 2-Layer Compression, Milliken Healthcare Products, LLC, Spartanburg, SC

References

1. Eberhardt R, Raffetto J. Chronic Venous Insufficiency. Circulation. 2014;130:333–346
2. Nelson EA, Adderley U. Venous leg ulcers. BMJ Clin Evid. 2016;2016:1902. Published 2016 Jan 15.
3. Data on file

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