

Case Series – The Use of Two-Layer Infused Compression Systems in Improving Wound and Periwound Tissue Outcomes

Introduction

Chronic venous leg ulcers (VLU) can be challenging to heal and are often fraught with higher rates of cellulitis and subsequent hospitalizations¹. In addition to the wounds themselves, the fragile periwound skin and surrounding tissue can be just as sensitive and is easily prone to breakdown. The sequela of venous disease can manifest itself as venous dermatitis, wound-related pain, or hardening and thickening of the skin.

Calamine and zinc infused compression wraps* have the capacity to provide VLUs the edema control required in wound healing as well as the protective factors the periwound skin needs to be soothed, preserved, and moisturized. The compression wraps also provide ease of removal that does not cause pain or damage to the wound or periwound tissue.

Methods

A three patient case series was completed for patients with VLUs that were placed into calamine / zinc infused compression. Each patient was treated with a two-layer infused (calamine or zinc) compression system that was changed by home health or the wound clinic 2-3 times per week. Calamine / Zinc infused wraps were chosen for patients with VLUs that had susceptible periwound skin that had the potential for further breakdown or that required moisture. At clinic visits wound size, healing progression, and condition of peri-wound skin were all assessed.

Results

All patients in this case series demonstrated positive wound healing outcomes with no significant complications related to the infused two-layer compression wraps. Positive healing outcomes include wound size decrease, peri-wound skin improvement, or a combination of both.

Discussion

Two-layer infused compression systems provided VLUs the edema management they require for wound improvement as well as providing the periwound skin and surrounding tissue the appropriate protection and nourishment it needs. This case study strongly supports the role of infused two-layer compression wrap systems in healing VLUs and providing gentle support to the often fragile and easily irritated periwound venous skin.

*CoFlex TLC Calamine and CoFlex TLC Zinc (OVIK Health, LLC, Spartanburg, SC 29303)

References

1. [Venous leg ulcers and prevalence of surgically correctable reflux disease in a national registry - Journal of Vascular Surgery: Venous and Lymphatic Disorders \(jvsvenous.org\)](#)

Case #1

95-year-old female
PMHx HTN, CKD Stage 3, chronic lower extremity venous disease and swelling.

The wound was initially a traumatic wound from a golf cart rollover accident s/p I&D of hematoma in 7/2023. She was lost to follow up and returned to the clinic in June 2024 with the same non-healing wound, uncontrolled lower extremity edema, and peri-wound inflammation.



7/11/24

Wound with exudate and denuded periwound while using impregnated gauze and light tubular compression. Hydrofiber dressings and calamine infused compression wrap initiated at this visit.



7/29/24

2.5 week follow up - new epithelial skin islands present, wound is smaller, and periwound appears healthy.



8/16/24

99% epithelialization after 5 weeks of dressings and calamine infused compression wrap.

Case #2

64-year-old male
PMHx DVT LLE with chronic venous stasis changes and edema, well-controlled DM, obesity.

Presented to wound care with a very large (388 sq cm) left leg venous ulceration that had been present for 10 months. The ulcer was a mixture of full thickness openings as well as partial thickness denuded skin.



4/2/24

Initial visit - patient was started on hydrofiber dressings and calamine infused compression wrap.



5/22/24

After 7 weeks of therapy, wound is primarily partial thickness and drainage has dramatically decreased.



6/11/24

Full epithelialization after 10 weeks of hydrofiber and calamine infused compression wraps.

Case #3

68-year-old female
PMHx DVT LLE with postphlebotic syndrome, coronary artery disease, hypertension, and CKD Stage 3.

Presented to wound care with left leg ulcer, stasis dermatitis, and inflammation of her left lower extremity. She had been self-treating her ulcer at home for 4 weeks.



6/27/24

Initial visit - LLE is inflamed and denuded with shallow venous ulcers present. Zinc infused compression wrap started, no primary dressing.



7/2/24

One week follow up - Wounds and skin are dramatically improved.



7/9/24

Two week follow up - LLE wounds 100% epithelialized. Inflammation and stasis dermatitis resolved.