An expanded evaluation of a dressing with negatively charged fibers in an outpatient wound center

Dot Weir, RN, CWON, CWS Saratoga Hospital Center for Wound Healing & Hyperbaric Medicine

Background

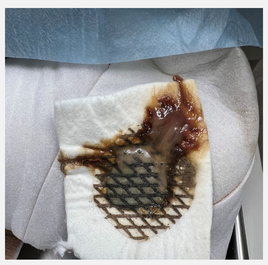
•Two well understood and documented components of wound bed preparation (WBP) include removal of devitalized tissue and management of surface bioburden. A new absorbent fiber dressing incorporating negatively charged fibers* (NCF) combined with silver salts had reports of interesting attraction to positively charged slough, particularly following cleansing/soaks with a pure hypochlorous acid preserved (pHA) cleanser to enhance the positive charge of the wound surface material.

•We evaluated this new dressing for continuous debridement of visually apparent slough in a variety of wounds, including wounds stalled for a variety of reasons including poor tolerance of maintenance debridement, atypical wounds with concerns for pathergy, and hypergranulation tissue. We also experimented with application techniques including application of an appropriate size as the primary dressing, cutting the dressing to fit in wounds with depth and bolstering with a secondary absorbent dressing.

•The ease of use for both clinic staff and patient self-application has been noted. Of significance is the ability to leave the dressing in place for debridement versus daily dressing changes and the cost savings versus topical enzymatic ointments. An additional bonus is that we were already utilizing a pure hypochlorous acid preserved cleanser which newer evidence suggests enhances the effectiveness of the dressing technology.

Illustration of the exudate created by dislodging slough





Cases: Examples of outcomes in a variety of wounds

62-year-old female, PMH: rheumatoid arthritis, chronic venous insufficiency and pyoderma gangrenosum. On multiple anti-inflammatory medications. Treated with pHA soaks, NCF Dressing and 2-layer wrap.

Day 0 12.5 sq cm Day 9 5.4 sq cm Day 17 5.5 sq cm Day 30 5.5 sq cm Day 80 closed

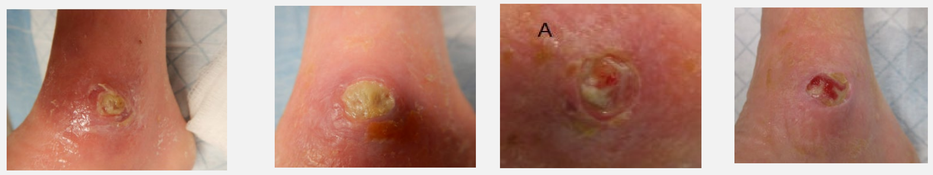
58 –year-old male, casino dealer PMH: chronic venous insufficiency with multiple ulcers, hypertension, Class III obesity. Unable to stay off his feet, poorly adherent with compression. Ulcer with fibrinous yellow tissue present for > 6 months. Treated with pHA soaks, NCF dressing and 2-layer wrap.

Day 0 Day 7 Day 14 Day 28 Day 35 Day 42

66-year-old male, PMH: Chronic venous insufficiency, multiple wounds present for 6 months. Works full time, inconsistent with clinic visits, refuses compression.. Began pHA soaks and NCF dressing, 2 x weekly.

Day 0 Day 21

92-year-old female, PMH: hypertension, post CVA, chronic kidney disease, arthritis, multi-level vascular disease. Ulcer present for >2 months, 5/10 pain level.



Day 0, began medical honey Day 14 began soaks with pHA and NCF dressing Day 19 Day 49

15-year-old male, traumatic wound from ATV accident. No PMH. Previously using Xeroform petrolatum gauze. Taught him to soak with pHA, apply NCF dressing and change daily or every other day. Continued to play baseball, encouraged him to use his experience as a science project.

Day 0 Day 6 Day 11 Day 20

Key Findings and Discussion

- The ease of use and the ability to leave the dressing in place for debridement versus daily dressing changes and the cost savings versus topical enzymatic ointments. An additional bonus is that we were already utilizing a pure hypochlorous acid preserved cleanser which newer evidence suggests enhances the effectiveness of the dressing technology.
- Of note is the importance of patient/carer education as to the expected appearance of the exudate noted upon dressing removal as slough dislodges.

Couch K. et al. The use of a Negatively Charged Fiber (NCF)* antimicrobial barrier dressing to manage slough and necrotic tissue in wounds in acute settings. Poster presentation, SAWC Spring 2024, Orlando, Florida.
Meaume, S., Dissemond, J., Addala, A. Evaluation of two fibrous wound dressings for the management of leg ulcers: results of a European randomised controlled trial (EARTH RCT). J Wound Care 2014; 23: 3, 105–116.

*Urgo Clean AG

Presented at SAWC Fall, Las Vegas, NV
Urgo Medical provided poster printing assistance
804-PB013