A Sweet Solution to a Bitter Life Problem: The Use of Active Leptospermum Honey on Wounds in a Patient with Lower Extremity Chronic Lymphedema Patient: A Case Study.

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INTRODUCTION

Chronic lower extremity (LE) lymphedema is a devastating disease due to multiple issues including cosmetic disfigurement and difficulty managing malodorous drainage. The cost of care burdens its victims. Lymphedema has been a neglected topic in WOCN practice but merits attention. In our clinic these challenging cases require a team approach.

A 42 year old morbidly obese male presented with a 15 year history of stage III LE lymphedema and a recent 3 month history of copious malodorous drainage. Multiple co-morbidities included IDDM, kidney disease (stage IV), hypertension, anemia, and polypharmacy, which delayed healing. Multiple sites of care affected communication.

Previous wound management included antifungals, silver hydrofiber dressings, absorbent pads, rolled gauze and elastic bandages. The quantities required led to out of pocket expenses over $300 weekly. Extensive maceration, denudement and uncontrolled drainage persisted.

The goals of care were:

- To identify an effective topical dressing plan
- To control exudate

This led to a team approach and a new topical dressing plan including Active *Leptospermum* Honey (ALH)*. ALH was chosen due to multiple mechanisms of actions including increased length of activity requiring less dressing changes.

CONCLUSION

In two months, LE condition began to improve despite hospital admission and complicating factors. Decreased frequency of changes and control of exudate reduced costs to less than $90 weekly. The number of dressings used and dressing change frequency had substantially decreased. The average local cost of ALH paste dressing per 3.5 oz tube averaged $27.00, calculating the need of probably 3-4 tubes a month, which is covered by pt's insurance. Pt reported feeling better about himself, and pt's mother reported pt having greater involvement in his own care since his condition improved.

Unfortunately, pt is aware renal failure is very likely part of his future. This will result in pt's medical coverage increasing. Although renal failure will negatively impact his health, pt sees this as a positive due to additional access to services.

Although limited to one case, this has been a learning experience with goals achieved and positive outcomes. ALH has added to the armamentarium of wound care choices as a first line option for pts with similar conditions. A larger randomized trial is recommended to substantiate observations.

REFERENCES:
Lewis PA, Aquilla A, Walsh ME, eds. Core Curriculum for Vascular Nursing, Salem, Mass: Society for Vascular Nursing; 2007.
Bryant R A , Nix, D.P. Acute and Chronic Wounds: Current Management Concepts. St. Louis, MO: Mosby Elsevier; 2012.
George N., Cutting K. Antibacterial Honey (Medihoney™): itn-vitro Activity Against Clinical Isolates of MRSA, VRE, and Other Multiresistant Gram-negative Organisms Including Pseudomonas aeruginosa; Wounds. 2007; 19. (9): 231 – 236.

*MEDIHONEY® Active *Leptospermum* Honey Dressings, Derma Sciences, Inc., Princeton, New Jersey, USA.
**Silvasorb® Gel, Medline, Mundelein, Illinois USA

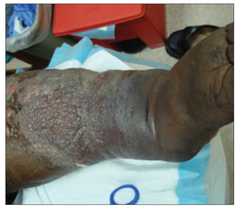
Derma Sciences provided an educational grant to support this research. The information may include a use that has not been approved or cleared by the Food and Drug Administration. This information is not being presented on behalf of Derma Sciences.

Poster content was updated from poster originally presented at WOCN 2012, Charlotte, NC

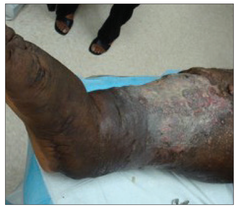
0660711-1-EN

Initial Visit: 8/16/11

Left Leg



Right Leg



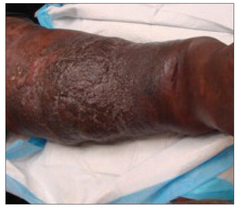
Assessment: L.leg presented with greater edema than R.leg. Both legs had lipodermatosclerosis and copious drainage amounts of malodorous, yellow-gray thick and creamy exudate (L.leg more than the R.leg). Dry, adherent thick areas of exudate were present in hypertrophic, bark-like appearance with papillomas and fissures that drained spontaneously, even 15-20 mins after dressing was removed. Prominent areas of denudement and extensive maceration remained in posterior and anterior L.leg, and in circular ankle area of R.leg.

Treatment: Cleansed wound with chlorhexidine topical cleanser followed by water and alternated with skin cleansing foam to prevent further irritation every other day. The following dressings were also applied; antimicrobial ionic silver gel** - one 1.5 oz. tube every 2 dressing changes, (14) absorbent pads, (4) roll gauzes and (4) 6" washable elastic wraps daily.

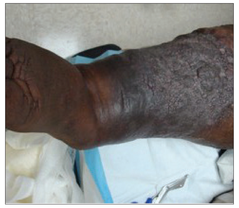
Pt was started on oral antibiotics. He was able to remove dressings to shower and cleansed legs as instructed. Pt's mother continued to assist with dressing changes. Insurance coverage was confirmed and wound care supplies were delivered to pt's home.

10/13/11

Left Leg



Right Leg

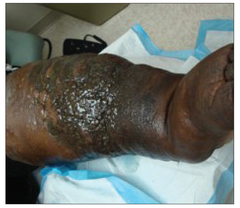


L.leg had dry skin, while the R. leg skin was intact, with minimal clear drainage only posteriously. The pt was hospitalized 10/6/11 – 10/12/11 at a local hospital with anemia and CHF. While at the hospital, the pt was started with zinc paste unna boots, bilaterally. The zinc residue was difficult to remove.

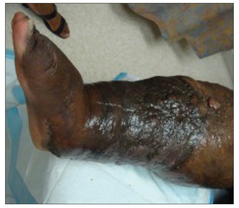
Treatment Plan: Both legs were cleansed with a skin cleansing foam. ALH paste dressings were applied bilaterally 2x a week in the clinic. The minimally draining areas were covered with absorbent pads, legs were wrapped with gauze rolls and secured with self adherent elastic wrap. An intermittent compression pump was ordered but wasn't initiated due to insurance waiting period of at least 6 wks.

11/10/11

Left Leg



Right Leg



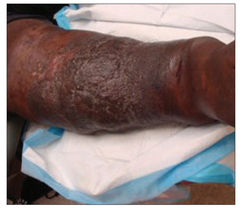
R.leg had moderate amount of serous exudate. Drainage was being managed without striking through compression bandage.

L.medial ankle had 3 cm x 2 cm area of soft gray tissue, which was weeping a small amount of creamy drainage. Maceration had occurred due to the dressing not be changed frequently enough. The pt came to the clinic 1x week and his mother changed his dressings 2x week as needed.

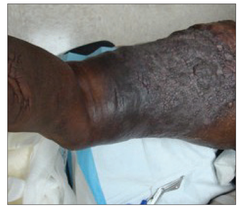
Treatment Plan: Pt was awaiting appointment in Dec. at another local Lymphedema Center for MLD and DCT. He was also waiting for insurance company to approve intermittent compression pump. Pt followed up with vascular MD when care at local Lymphedema Center concluded.

9/22/11

Left Leg



Right Leg



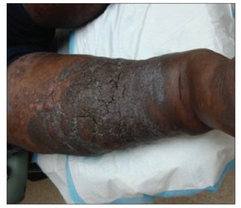
Assessment: R. leg presented with no denudement, no exudate residue, no odor and no pain. L.leg was still being wrapped by a local Lymphedema Center until 9/22/11. When dressings were changed on L.leg folds, they were not as free of debris as R.leg. Edema improved in both legs.

Local Lymphedema Center stopped treatments on this date due to "lack of progress".

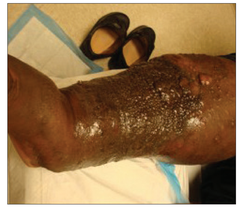
9/22/11: Both legs had started to receive the same treatment of ALH paste dressing, (4) absorbent pads, (3) roll gauze wraps and reusable elastic bandage wraps every 1-2 days, depending on amount of exudate.

10/28/11

Left Leg

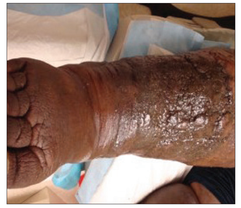


Right Leg

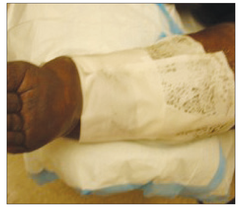


LE presented with minimal denuded areas in medial R.leg and posterior proximal L.leg. There was minimal bilateral drainage, less in the R.leg than in the L.leg, but varied due to pt's overall health status. The pt only had to change dressings to L.leg once in between clinic visits. Clinic visits continued 2x a week.

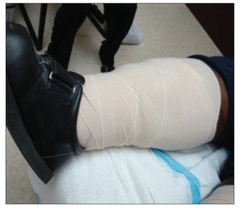
Dressing Procedure



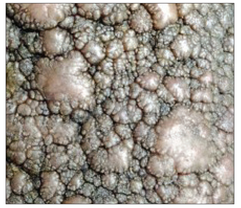
ALH paste dressing.



ALH paste dressing and non-adherent contact layer dressing.



Absorbent pads covered draining areas, then roll gauze and 6" reusable elastic wrap were applied.



Skin had "Bark-Like papillomas and fissures.