

Comparison of Honey-Impregnated Alginate Dressings to Non-impregnated Calcium Alginate Dressings on Wound Healing

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INTRODUCTION

The therapeutic effects of honey impregnated dressings have been well documented.¹⁻³ Experience in the United States has been limited as its use was not FDA cleared until July 2007.

OBJECTIVE

To compare changes in wound size and presence of non-viable tissue between honey impregnated calcium alginate dressings (HICADs) and non-impregnated calcium alginate dressings (NICADs).

METHODOLOGY

Three patients presenting with multiple lower extremity wounds with underlying venous hypertension were selected to have HICADs* and NICADs applied so that each patient had a minimum of one HICAD and one NICAD dressing to wounds of similar size. Dressings, changed every other day and prn for strike-through drainage, were covered by non-adhesive foam. Four layer compression wraps were used adjunctively in accordance with standards of care.

OUTCOME

Autolytic debridement appeared equal between NICADs and HICADs. Decreases in wound area were accelerated in all HICAD wounds as compared to NICADs.

CONCLUSION

HICADs may accelerate decreases in wound size related to its antimicrobial and other therapeutic properties not associated with NICADs. Further studies are indicated.

References:

1. Molan PC. The evidence supporting the use of honey as a wound dressing. *Int J Low Extrem Wounds*. 2006;5(1):40-54.
2. George NM, Cutting K. Antibacterial Honey (Medihoney™): in-vitro Activity Against Clinical Isolates of MRSA, VRE, and Other Multiresistant Gram-negative Organisms Including *Pseudomonas aeruginosa*. *Wounds*. 2007;19(9):231-236.
3. Cutting K. Honey and Contemporary Wound Care. *Ostomy Wound Management*. 2007; 53(11):49-54.

Patient 1

47 year old male with pyoderma gangrenosum presented to the outpatient clinic after two weeks of hospitalization for cellulitis associated with the open leg wound. NICAD and HICAD applied to similarly sized areas of the wound. Along with systemic steroids, the patient achieved a 31% reduction in the HICAD wound as compared to the 18% NICAD wound within 5 weeks. There was minimal exudate and pain, allowing the patient to return to work.



Baseline



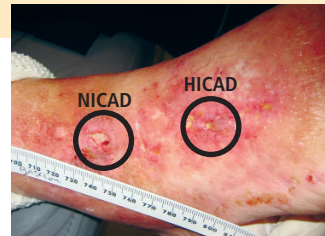
Week 2 - Left side of wound HICAD, right side of wound NICAD



Week 5 - Left side of wound HICAD, right side of wound NICAD

Patient 2

52 year old female with 15 year history of scleroderma and 5 year history of CREST. A previous calcinosis wound on same foot was treated with excision and grafting. New wounds developed in the same foot 18 months later and patient refused invasive intervention. NICAD and HICAD dressings were applied. Within two weeks, there was less discomfort. HICAD treated wound had a healthy base and healed by week 4. The residual NICAD dressing was subsequently changed to HICAD and was resolved by week 8.



Baseline - NICAD on left, HICAD on right



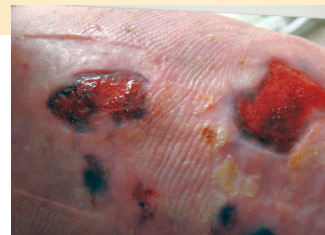
Week 4 - Close-up of NICAD



Week 4 - Close-up of HICAD resolved

Patient 3

72 year old female with a history of Crohn's disease developed leg ulcers subsequently determined to be pyoderma gangrenosum. Patient was treated with systemic steroids, light compression to reduce edema and either HICAD or NICAD. By week two the HICAD wound was reduced by 62% and was healed on the third visit. The residual NICAD dressing was subsequently changed to HICAD and subsequently resolved in 4 weeks.



HICAD on left, NICAD on right



Week 3 - HICAD on left, NICAD on right



HICAD

*MEDIHONEY™ Absorbent Calcium Alginate Dressing with *Leptospermum* Honey, Derma Sciences, Inc., Princeton, New Jersey. Funding for costs associated with this poster provided by Derma Sciences.

The information in this poster concerns a use that has not been approved or cleared by the US Food and Drug Administration