



### Debridement (Autolytic)

#### **TheraHoney**

**Arocho P. A Novel 100% Manuka Honey Impregnated Foam Promoted an Optimal Moist Wound Healing Environment in Necrotic Wounds of Various Etiologies. Presented at the Wound, Ostomy and Continence Society's Conference; San Antonio, TX; June 2015. (Ask your Medline representative for a copy of this poster, LIT050WC)**

The aim of this study was to describe the use of Therahoney Foam on hospice patients. A convenience sample of 10 patients with a variety of wound with slough or eschar was selected. Therahoney Foam was secured with fabric tape, gauze or hydrocolloid dressing. After two dressing changes or up to one week, Therahoney Foam made a visible and measurable difference in the wound bed. Notably, two unstageable pressure ulcers improved and revealed to stage III ulcers on the coccyx and the right elbow. All wounds improved, and most were deemed ready for conservative sharp debridement. Therahoney foam was found to be a useful tool to keep in stock to help improve the quality of life of these hospice patients.

**Chaiken N. Comparative Evaluation of a Hydrogel to a 100% Manuka Honey Dressing for wound closure in a hospital and long term care facility. Presented at the Wound, Ostomy and Continence Society's Conference; San Antonio, TX; June 2015. (Ask your Medline representative for a copy of this poster, LIT052WC)**

The purpose of this pilot study was to examine the difference in wound closure rates following the use of Skintegrity Hydrogel or Therahoney gel in sacral and buttocks pressure ulcers in a hospital and long term care facility. This pilot study consisted of 14 patients with 18 preexisting pressure ulcers, of varying stages from stage II to unstageable, who were then randomized into the Skintegrity or Therahoney group. In the Skintegrity group, the average number of treatment days was 7.1 days for 7 patients with 8 pressure ulcers. Overall, necrotic tissue decreased by an average of 13%, and the wound area increased by an average of 6%, with the wounds of patients 5 and 13 increasing by 122% and 119%, respectively. Excluding the wounds that increased in size, the average decrease in wound area was 37%. The pressure ulcers of four patients worsened. In the Therahoney group, the average number of treatment days was 19.1 days for 7 patients with 10 pressure ulcers. The average decrease in wound area was 59% with an average 5% decrease per day and a 50% decrease in necrotic tissue. Three wounds closed completely in 10, 12 and 14 days. The preliminary results show that Therahoney gel is a better option than Skintegrity for optimal treatment of pressure ulcers with some necrotic tissue.

**Jacobs T, Artusa S, Offerman C, Barnes L, McIntosh A. The Use of 100% Manuka Honey for Moist Wound Management and Promotion of Autolytic Debridement in an Inpatient Population with Wounds of Mixed Etiology. Presented at the Wound, Ostomy and Continence Society's Conference; San Antonio, TX; June 2015. (Ask your Medline representative for a copy of this poster, LIT072WC)**



## Clinical Evidence Surrounding Skin Health

The aim of this study was to evaluate Therahoney HD for the promotion of autolytic debridement and wound management in an inpatient population. A convenience sample of 20 patients with 30 necrotic wounds of various etiologies was selected. Wound measurements include wound size, percent necrotic tissue, odor score (1-10 worst), erythema score (0-4 severe), pain (1-10 worst) on application and 10 minutes post-application and ease of change (1-5 difficult). The patients were seen for an average of six days. The average total wound area reduction was 35%, with an average 8.3% daily reduction. Two wounds closed completely. Eight of the 30 wounds reduced in size by at least 50%, and another five wounds closed by at least 25%. The average total necrotic tissue reduction was 35%, with an average daily reduction of 8.3%. Five wounds were completely free of necrotic tissue. The amount of necrotic tissue decreased by at least 50% in six wounds and by at least 25% in five wounds. The average wound odor, erythema, pain on application and after 10 minutes, and change scores were 0.82, 0.41, 1.28 and 1.24, and 1.01, respectively. Therahoney HD promoted a moist wound healing environment conducive to autolytic debridement and wound healing

### **Chakravarthy D, Roman M. In Vitro Comparison of the Absorbency Capacity of Four Medical Grade Manuka Honey Dressings. 2015. (Ask your Medline representative for a copy of this poster, LIT028WC)**

The purpose of this in vitro study was to compare the absorptive capacity of a Medihoney Honeycolloid, Medihoney Calcium Alginate, Therahoney HD and Therahoney Foam. A sample size of 10 per test group was used. The dressings were weighed before and after being placed into a 37°C solution with an iconic composition comparable to wound exudate for 30 minutes. Both Medihoney Calcium Alginate, Therahoney HD reported negative absorptive values,  $-1.80 \pm 1.77$  g/100cm<sup>2</sup> and  $-2.50 \pm 0.54$  g/100cm<sup>2</sup>, which was likely due to the dissolution of honey into the test solution. Medihoney Honeycolloid dissolved in the test solution. The Therahoney Foam had an absorbency value of  $30.60 \pm 2.15$  g/100cm<sup>2</sup>, which may indicate greater wound exudate absorption.

### **Wahab N, Wray K. The Use of a Medical Grade Honey Impregnated Foam Dressing to Maintain A Moist Healing Environment for the Promotion of Autolytic Debridement and for the Absorbance of Exudate In a Long-Term Care Facility. Presented at the APWCA; Philadelphia, PA; March 2015. (Ask your Medline representative for a copy of this poster, LIT032WC)**

An evaluation of Therahoney Foam was conducted at the long term acute care facility on 10 patients with wounds for whom sharp debridement was not an option. The average wound duration of these patients was 2.4 months. Three patients presented with macerated and erythematous peri-wound skin and one patient had macerated peri-wound skin. After the first dressing change, the periwound skin was once again intact. Five patients achieved 100% reduction in necrotic tissue, and two patients healed at dressing changes 3 and 4. Overall, there was a trend towards wound healing. Therahoney Foam promoted a moist wound healing environment conducive to autolytic debridement while simultaneously absorbing wound exudate for optimal moisture balance.

### **Hune S, Smith D, Clarke C, Seto D. Team Approach to Chronic Wound Management in Long-term Care in Canada. Presented at the Clinical Symposium on Advances in Skin & Wound Care; Las Vegas, NV; September 2014. (Ask your Medline representative for a copy of this poster, LIT004WC)**



## Clinical Evidence Surrounding Skin Health

The purpose of this study was to identify an effective holistic approach in preventing and managing chronic wounds in a Canadian four-center long term care geriatric population. The 20 patients had infected unstageable ulcers or infected stage III and IV ulcers who failed to close with betadine wet to dry dressing twice daily. For the study, the treatment was changed to Therahoney, Maxorb, and a foam cover dressing. After approximately two to three weeks of management with Therahoney and Maxorb complete autolytic debridement of necrotic tissues was achieved. After two to five months, all wounds had improved noticeably or were completely healed.

**Vicencio G, Chakravarthy D. The Use of Leptospermum (Manuka) Honey for the moist wound management and promotion of autolytic debridement of necrotic tissue from pressure ulcers wounds. Presented at the Clinical Symposium on Advances in Skin & Wound Care; Las Vegas, NV; September 2014. (Ask your Medline representative for a copy of this poster, LIT001WC)**

Often in this LTAC center, patients with pressure ulcers of various stages are not candidates for sharp debridement. The purpose of this 16 patient case series was to evaluate a 100% Manuka honey based gel (Therahoney) in the care management of pressure ulcers. The average duration of wound care for all patients was 12.6 days. Two patients achieved 100% reduction in visually assessed necrotic tissue, in 6 and 14 days, respectively. The average wound size for the patients treated was 65.6 cm<sup>2</sup>. Over the course of the study an average reduction in wound size of almost 45% was achieved. For five patients, the reduction in wound size was well over 50%. The use of Manuka honey was found to be an appropriate care option for management of necrotic pressure ulcers in the LTAC setting.

Gibson DJ, Yang Q, Kerekes DT, Schultz GS. Medical Honey and Silver Dressings Do Not Interfere with Each Other's Key Functional Attributes. *Wounds*. 2014;26(11):309-316.

**Open access; full article publically available online:** <http://www.woundsresearch.com/article/medical-honey-and-silver-dressings-do-not-interfere-each-other%E2%80%99s-key-functional-attributes>

**Purpose:** The objective of this study was to determine whether silver-containing dressings and medical-grade honey gel interfere with one another's key properties, including honey's osmotic strength and primary sugars and silver's antibacterial properties, in measurable ways *in vivo* and *ex vivo*.

**Conclusion:** The data demonstrate that the combination of honey with silver dressings resulted in an increased osmolarity because the concentration of its 2 primary sugars and overall osmolarity increased, and the *in vitro* antibacterial barrier activity related to silver did not decrease and in some instances increased.

**Wahab N. Promotion of Autolytic Debridement by Maintaining a Moist Wound Environment via the use of a Medical Grade Honey in a Long Term Acute Care Setting. A version of this was presented at the Clinical Symposium on Advances in Skin & Wound Care; Orlando, FL; October 2013. (Ask your Medline representative for a copy of this poster, LIT921)**

In this long term acute care facility, some wounds are not amenable to sharp debridement. Thus, the purpose of



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this study was to evaluate the use of medical grade honey (TheraHoney) in combination with a superabsorbent dressing (Optilock) to provide a moist wound environment to help promote autolytic debridement of necrotic tissue and manage high levels of exudate. In a convenience sample of 15 patients, some with multiple wounds. Overall, there was a 50% reduction in wound size. The conclusion was that the necrotic tissue level in the wounds, on average, decreased steadily over time, accompanied by average wound size reduction.

**Schmidt K, Chakravarthy D. The Use of Leptospermum Scoparium (Manuka) Honey for the Moist Wound Management and Promotion of Autolytic Debridement of Necrotic Tissue from Wounds of Mixed Etiology. A version of this was presented at the Symposium on Advanced Wound Care, Fall; Las Vegas, NV; September 2013. (Ask your Medline representative for a copy of this poster, LIT1032)**

In this acute care center, a diverse array of wounds are seen where a patient is unable to undergo sharp debridement. The purpose of this 10 patient case series was to evaluate the use of 100% Manuka honey-based gel (TheraHoney Gel and Dressings) in the care management of chronic wounds of varying etiologies. Six of the patients only received the Manuka honey gel for 7 days or less, with an average rate of reduction in necrotic tissue of 41.1% per week. For all patients, the average duration of use was 12.2 days. Three patients achieved 100% reduction in visually assessed necrotic tissue in 7 days, 17 days, and 25 days. One patient reached full wound closure after 25 days. Four patients achieved noticeable wound reduction of the course of use, with reductions ranging from 16.7% to 83.3% over the assessment period. The study concluded that the Manuka honey gel provided a moist wound environment conducive to wound healing.

**Maxfield K, Chakravarthy D. The use of Medical Grade Manuka Honey in the Management of Wounds in a Hospice of Palliative Care Setting. Presented at the Symposium on Advanced Wound Care, Fall; Las Vegas, NV; September 2013. (Ask your Medline representative for a copy of this poster, LIT1033)**

Though wounds are not the cause of death in a hospice setting, wounds negatively impact the quality of life of both patient and family. The focus of a hospice is to provide comfort, relieve suffering, and improve the quality of living. Therefore, the aim of the study was to describe the use of medical grade Manuka honey (TheraHoney) on terminal patients. In this eight week study, 12 terminally ill patients with a total of 19 wounds participated in the study. Of the 19 wounds, 15 wounds experienced an average of 13% wound size reduction. Though four wounds did increase in size, two were from patients who expired, one required a calcium alginate dressing for tunneling, and one received less than four weeks of care with medical grade honey dressings. The study concludes that the medical grade honey provided a moist wound environment that effectively removed necrotic tissue, and many wounds healed or entered a healing trajectory in terminally ill patients.

**Livingston M. The use of Leptospermum (Manuka) Honey Gel to Manage wound that have significant presence of necrotic tissue. Presented at the Symposium on Advanced Wound Care, Fall; Las Vegas, NV; September 2013. (Ask your Medline representative for a copy of this poster, LIT768)**

The purpose of the study was to evaluate the use of Manuka Honey Gel (MHG, TheraHoney) in transferring exudate while maintaining moisture without wound maceration. Seven patients with necrotic wound beds who



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could not undergo sharp debridement were chosen for a 4 week study. Three patients achieved wound closure prior to the end of study. There was a 68% wound area reduction during the 4 week period of study. The study concludes that the use of 100% MHG provided a moist wound environment to help promote autolytic debridement of necrotic tissue.

**Montoya L. The use of Leptospermum (Manuka) Honey for the moist wound management of wounds when sharp debridement is not an option or not preferred by the patient. A version of this was presented at the Wound, Ostomy and Continence Society's Conference; Seattle, WA; June 2013. (Ask your Medline representative for a copy of this poster, LIT1068)**

In this wound center, the purpose of the case studies was to evaluate the use of two 100% Manuka honey based products (TheraHoney), a gel and a contact layer with perforations, in providing a moist wound environment to help promote autolytic debridement when sharp debridement is not an option. Twelve patients who could not undergo sharp debridement participated in the study. At an average of 23 days, six patients with 6 wounds achieved 100% reduction in necrotic tissue. Five of those six patients achieved closure in an average of 43.3 days. Given the diverse nature of the wounds, it was determined that the use of Manuka honey dressings was an appropriate option for the wound management of necrotic wounds when sharp debridement was not.

**Van Gils CC, Bacon D, Andersen N. The combined use of Sharp Debridement and Manuka Honey dressing for the Management of Necrotic Tissue in Chronic Lower Extremity Wounds. A version of this poster was presented at the Symposium on Advanced Wound Care, Spring; Denver, CO; May 2013. (Ask your Medline representative for a copy of this poster, LIT1070)**

An essential component of successful wound healing in chronic wounds is the reduction or elimination of necrotic tissue, but necrotic tissue is known to recur between serial debridement. Therefore, the purpose of this study is to evaluate the combined use of sharp debridement with Manuka honey dressings (TheraHoney). The selection criteria included the presence of a lower extremity wound of greater than 30 days duration, the presence of at least 50% necrotic tissue in the wound base, and the willingness to participate in dressing changes and weekly follow ups. Ten patients underwent wound care with a honey based contact layer or gel and sharp debridement was performed weekly. The study demonstrated that a moist wound environment from the Manuka honey dressing helped promote autolytic debridement and may be a useful adjunct to serial sharp debridement.



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These publications were presented at various wound care conferences to share research and clinical results within a scientific community. The information is intended for healthcare professionals in the US only. It is provided for informational purposes and is not intended to replace a discussion with a healthcare provider. All decisions regarding patient care must be made with a healthcare provider and consider the unique characteristics of each patient.

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