ANTIBACTERIAL DRESSING
MEDIHONEY®

The impact of MEDIHONEY® on Deep Partial Thickness Burns

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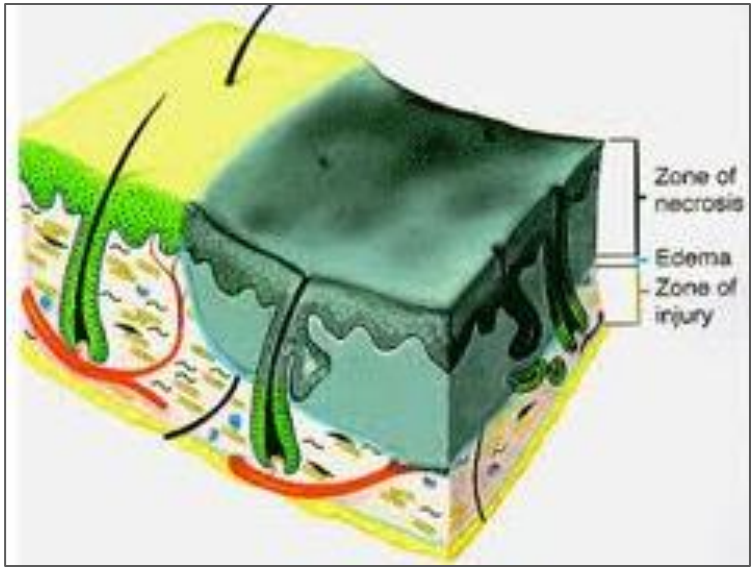
DERMASCIENCES

Agenda

- My Clinical Practice
- Why MEDIHONEY®? What can it do?
- A Review of Cases
- Impact on My Practice
- Tips & Pointers
- Q&A



My Clinical Focus

- Treatment of Burn Injuries in both paediatric and adult patients
- Our goal is to heal wounds in the shortest period of time
- Limit functional consequences while optimizing cosmetic outcomes

MEDIHONEY®

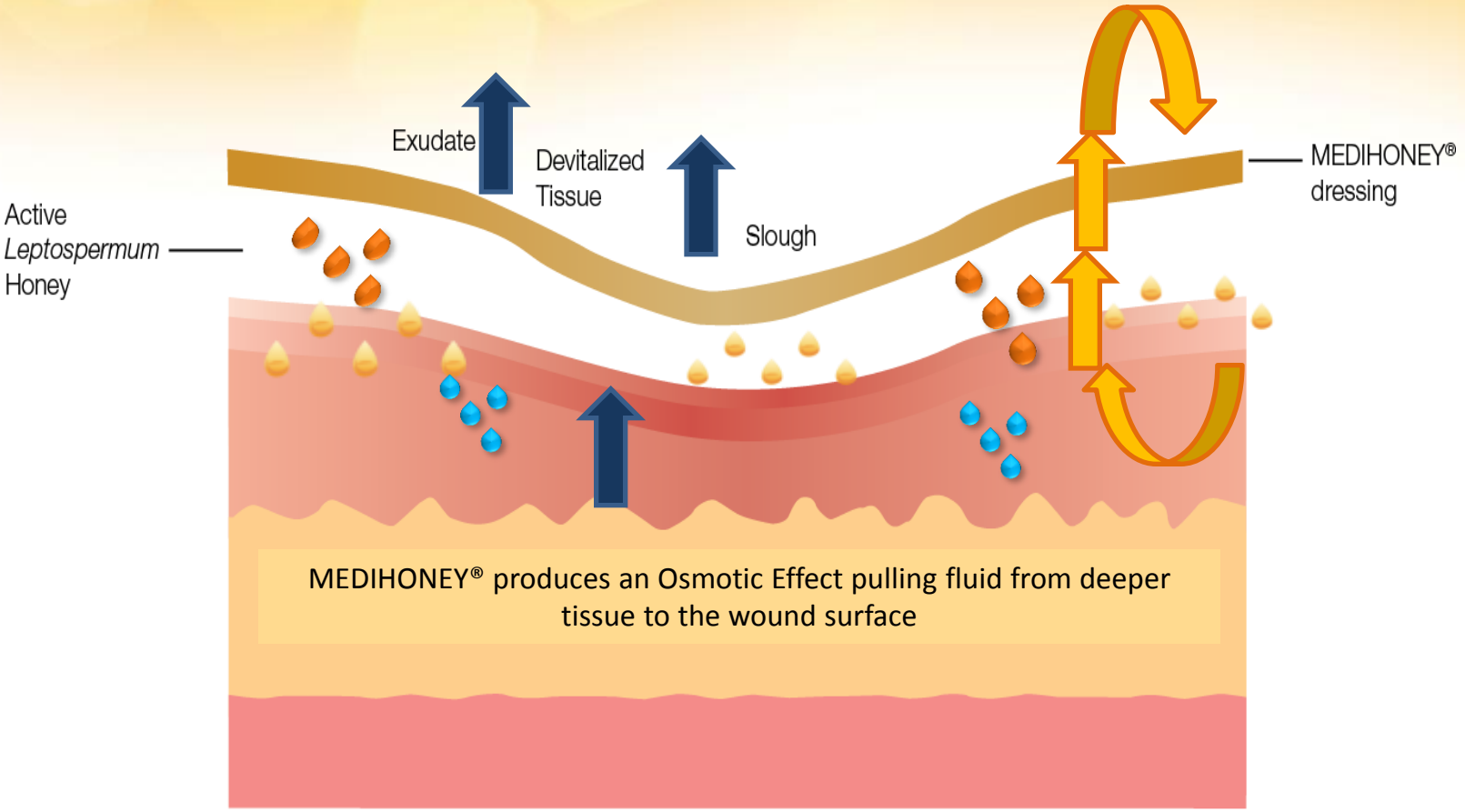
What is it? What can it do?

- Derived from the nectar of a specific *Leptospermum Scoparium* (=**MANUKA**) species of plant in New Zealand
- Unique among honey – **maintains its effectiveness** even in the presence of wound fluid

- Supported by over 160 pieces of evidence, including Randomized Controlled Trials, Peer-Reviewed articles and posters, demonstrating efficacy in the management of wounds and burns.[1]
- **Many mechanisms of action** create an optimal environment for wound healing – **High Osmolarity**, **Low pH, Non-peroxide Activity…**

1. MEDIHONEY Reference List. Derma Sciences..

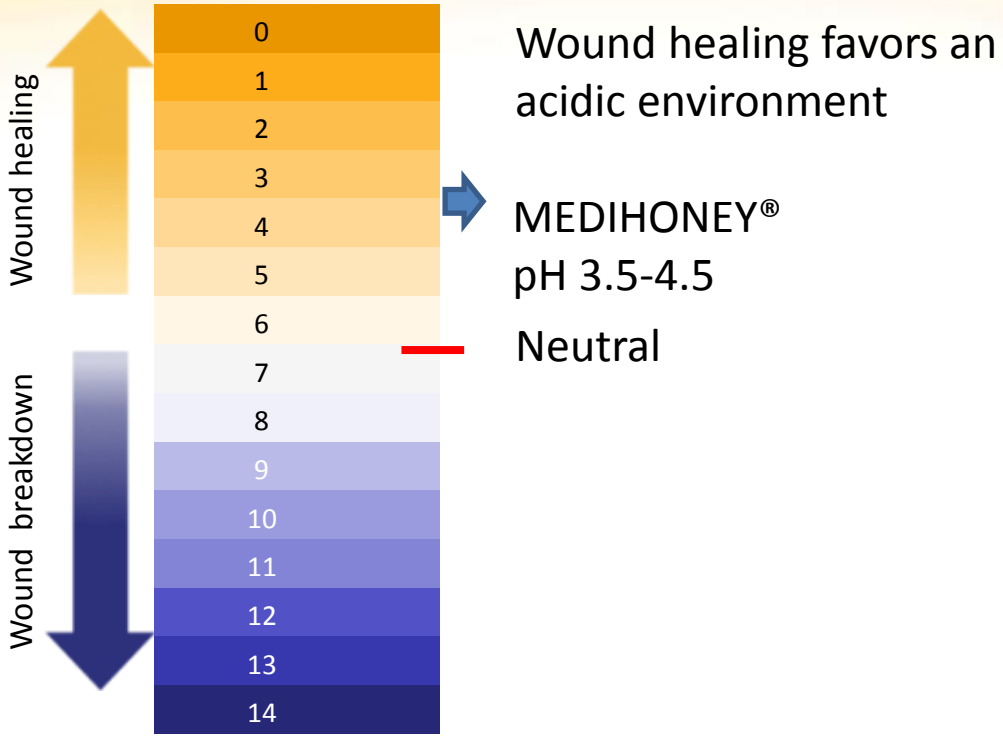
High Osmolarity



Works with the body's natural processes to bathe the wound bed promoting the removal of devitalized tissue[2,3]

2. Acton C, Dunwoody G. The use of medical grade honey in clinical practice. *British J Nursing* 2008;17(20): S38-S44.
3. Chaiken, N. Pressure ulceration and the use of Active Leptospermum honey for debridement and healing. *Ostomy Wound Management* 2010;56(5), 12-14.

Low pH



The low pH of MEDIHONEY® (3.5-4.5) helps to lower the pH within the wound environment[4-5], which has been shown to have wound healing benefits.[6]

4. Gethin G. Influence of Manuka honey on surface pH, MMP-2, MMP-9 and wound size of chronic wounds. European Wound Management Association Conference, Lisbon, Portugal, May 2008.
5. Milne SD, Connolly P. The influence of different dressings on the pH of the wound environment. J Wound Care. 2014 Feb;23(2):53-4, 56-7.
6. Leveen H, Falk G, Borek B, Diaz C, Lynfield Y, Wynkoop B, Mabunda GA et al. Chemical acidification of wounds. An adjuvant to healing and the unfavourable action of alkalinity and ammonia. *Annals of Surgery*. 1973. 178(6): 745-50.

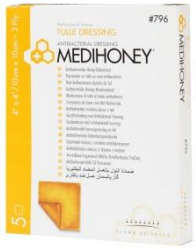
Different Configurations Assist in Wound Bed Preparation

MEDIHONEY® 100%

MEDIHONEY® Barrier Cream

MEDIHONEY® Wound Gel

MEDIHONEY® HCS



MEDIHONEY® Tulle

MEDIHONEY® Apinate

MEDIHONEY® Gel Sheet

Background & Case Review

BACKGROUND

- Early excision and autologous grafting remains as the gold standard for third degree burns and deep partial thickness burns, which are unlikely to heal in 3 weeks[7,8]

- However, in clinical practice this approach may not be ideal for:
  - Frail, elderly patients
  - Patients with significant co-morbidities in whom anaesthesia may not be desirable
  - Relatively small burns
  - Certain areas of the body (such as the face, scalp or genitalia)
  - Patients that decline surgery

- In these cases, providing an environment that would hasten debridement and removal of devitalized tissue would facilitate healing and wound closure

7. Janzekovic Z.A new concept in the early excision and immediate grafting of burns. J Trauma 970;10:1103---8.
8. Engrav LH, Heimbach DM, Rues JL, et al. Early excision and grafting vs nonoperative treatment of burns of indeterminate depth: a randomized prospective study. J Trauma 1983;23:1001---4.

BACKGROUND

- One study compared the effectiveness of a honey dressing to Silver Sulphadiazine (SSD) on wound healing in patients with first and second degree burns. Patients treated with honey dressings had a significantly shorter duration of healing compared to patients treated with SSD[9]
- These studies provide evidence that honey may be an effective treatment option for partial thickness burns
- This Case Review explores examples of our clinical experience with MEDIHONEY® in the treatment of burn patients since 2013, which has prompted our initiation of an RCT on this product

9. Malik, K.I., Malik, M.N., & Aslam, A. Honey compared with silver sulphadiazine in the treatment of superficial partial---thickness burns. International Wound Journal, 2010; 7(5), 413---417.

Case 1 – Deep Partial Thickness Burn to Forehead

DAY 1

- 47 year old female patient who experienced burns secondary to hair grooming product
- Treatment: MEDIHONEY® Wound Gel applied three times a day

Case 1 – Deep Partial Thickness Burn to Forehead

DAY 16

Area Healed

Epithelial edge advancement

Clean, healthy granulation tissue

Case 1 – Deep Partial Thickness Burn to Forehead

DAY 36

Re-Epithilialization Complete

Pigmentation returning

Case 1 – Deep Partial Thickness Burn to Forehead

Summary

Wound closure, hair follicle regrown, pigmentation returns after 7 weeks of MEDIHONEY® Wound Gel treatment

No hypertrophic scarring

Case 2 – Deep partial thickness burns to Face

Day 1

- Patient attempted to light a cigarette while on oxygen
- Patient also experienced burns to left arm when clothes caught on fire
- Surgery procedure – Ultrasonic debridement performed on face
- MEDIHONEY® Wound Gel initiated after surgery – daily changes

Case 2 – Deep partial thickness burns to Face

Day 3: Remaining eschar is being softened and liquefied by the MEDIHONEY®

Day 4: As eschar is softened, it is easily removed, revealing advancement in healthy tissue formation

Case 2 – Deep partial thickness burns to Face

Day 5: wound continues to improve

Day 11: Nose is healed; pink healthy skin among remaining devitalized tissue. Continued Wound Gel to complete healing.

Case 2 – Deep partial thickness burns to Face

Summary

Post ultrasound debridement, MEDIHONEY® Wound Gel promoted continuous removal of devitalized tissue and rapid healing in less than 2 weeks.

Case 3 – Deep Partial Thickness Burn impacting hair line

Day 1

- 54 year old female
- Deep burns to forehead/face secondary to flame burns caused when hair caught fire
- Surgery would jeopardize follicle regrowth and return of normal hairline.

Case 3 – Deep Partial Thickness Burn to Forehead

Week 3

Week 5

Week 7

- Daily application of MEDIHONEY® Wound Gel
  Wound healing, follicle regrowth closing in toward deepest part of burn

Case 3 – Deep Partial Thickness Burn to Forehead

Summary

- Less than 2 months, wound healing even at deepest area of injury
- Patient will retain normal hairline
- Wound continued to completely fill in as observed in further clinical follow up – however, no image taken

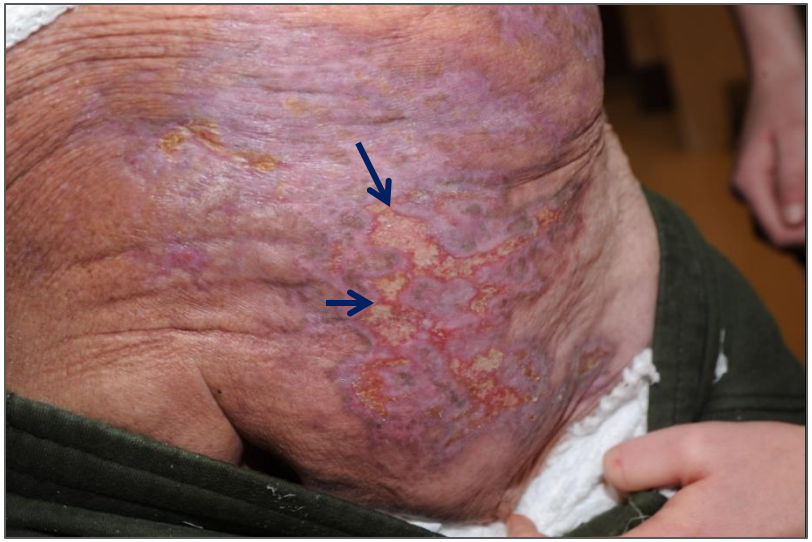
Case 4 – Stage IV Lung Cancer Patient with contact burns

Day 1

- 82 year old male with burns secondary to heating pad
- Not a surgical candidate
- MEDIHONEY® Wound Gel applied daily and covered with non-adherent dressing

Case 4 – Stage IV Lung Cancer Patient with contact burns

Day 21 (3 weeks)



- Significant area of wound is closed.
- Small areas - continued wound edge advancement

Day 42 (nearly 6 weeks)

- Wound closure

Case 5 – Deep Burns in Immunosuppressed Crohn's Patient

Initial Presentation
3 Weeks Post Burn

- 72 year old female with Crohn's, CRF, short bowel syndrome
- Currently on TPN, COPD and high dose prednisone
- Burns caused by heating pad to left hip
- Patient referred to clinic 3 weeks after injury
- Area covered with 95% yellow slough
- Initiated MEDIHONEY® Wound Gel and non-adherent dressings

Case 5 – Deep Burns in Immunosuppressed Crohn's Patient

Day 10 after initiation of treatment

- Slough greatly reduced
- New granulation tissue and wound edge advancement observed

Case 4 – Deep Burns in Immunosuppressed Crohn's Patient

Day 25 (Wk 3 after initial treatment)

- Increase in granulation tissue

Day 65 (Wk 9 after initial treatment)

- Continuous progress as wound edges continue to advance to close this injury

Case 5 – Deep Burns in Immunosuppressed Crohn's Patient

Day 75 (Month 3 after initial treatment)

- Wound closure with MEDIHONEY® alone
- No complications experienced by immunocompromised patient
- No other intervention or antibiotic required

Case 5 – Deep Burns in Immunosuppressed Crohn's Patient

Summary

Complete epithelialization without surgical intervention or complications in patient on corticosteroids in 3 months
No hypertrophic scarring

Case 6 – Deep Partial Thickness Burn to Hand

Day 4

Day 19

- 47 year old female with burns to right hand caused by hot grease
- Superficial and deep partial thickness burns
- Daily MEDIHONEY® Wound Gel applications for complete healing in less than 3 weeks.

Case 7 – Deep Partial Thickness Burn in Pediatric Patient

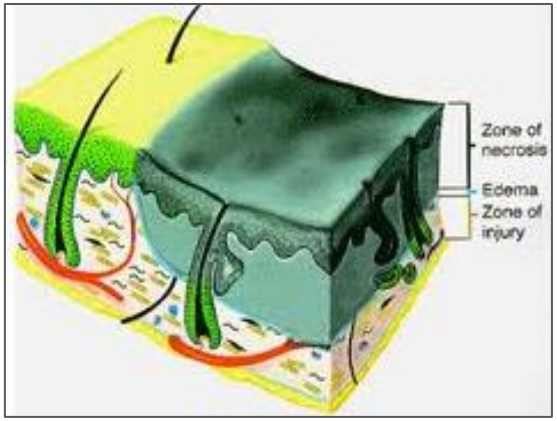
Day 1

Day 11

- 2 year old male with burns caused by curling iron
- Daily MEDIHONEY® Wound Gel applications, covered with non-adhering dressing
- Rapid healing in less than 2 weeks

Impact of MEDIHONEY® to Practice

- Effective intervention for Deep Partial thickness burns
- Ideal patients:
  - Elderly, children, malnourished, cancer
  - Burns to face
  - Palms of the hand, plantar aspect of feet
- Accessible – Patient access and affordability



TIPS & Pointers

- MEDIHONEY® Wound Gel contains gelling agents making it more stable at body's temperature than Medihoney 100%
- Paste is more fluid with no gelling agents; useful for burns affecting mouth and may be accidentally swallowed
- A cover dressing will keep area moist/prevent the Wound Gel product from drying out. If unable to cover area (i.e face), product needs to be re-applied every 6 hours.
- For wounds with small amount of drainage, the MEDIHONEY® HCS dressing is very effective, comfortable and no cover dressing needed

Wound Gel

HCS

Medihoney 100%

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MEDIHONEY®

Questions?

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