

Short communication

Manuka honey dressing: An effective treatment for chronic wound infections

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Abstract

The battle against methicillin-resistant *Staphylococcus aureus* (MRSA) wound infection is becoming more difficult as drug resistance is widespread and the incidence of MRSA in the community increases. Manuka honey dressing has long been available as a non-antibiotic treatment in the management of chronic wound infections.

We have been using honey-impregnated dressings successfully in our wound care clinic and on the maxillofacial ward for over a year.

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Introduction

The emergence of antibiotic resistant bacteria, particularly methicillin-resistant *Staphylococcus aureus* (MRSA) has posed problems in the management of chronic wound infections.

Many studies^{1–4} have shown that honey has antibacterial activity in vitro, and clinical case studies have shown that application of honey to severely infected cutaneous wounds is capable of clearing infection from the wound and improving healing. The osmotic effects and pH of honey are also thought to aid its antibacterial actions. It is also known that honeys derived from particular floral sources in Australia and New Zealand (*Leptospermum* spp.) have increased antibacterial activity, and these honeys have been approved for marketing as therapeutic dressings.

Methods

We have been using Manuka honey tulle dressings (Activon) for the last year in our wound care clinic and wards, and have had success in treating recalcitrant surgical wounds within the maxillofacial unit, which had proved to be resistant to antibiotics. The honey-impregnated dressing is applied directly on to the surface of the wound and is then covered in a second absorbent layer to contain the honey. Dressings are changed every 2–3 days.

Case 1

An 80-year-old man had a split skin graft harvested from his upper arm in May 2005 (Fig. 1A). The wound was managed until September 2005 with routine wound dressings but remained contaminated with MRSA. The first Manuka honey dressing was applied at the end of September 2005 and the wound had healed 2 weeks later (Fig. 1B).

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Fig. 1. (A) Infected split skin donor site in the upper arm. (B) Upper arm healed after 2 weeks.

Case 2

A 64-year-old man had a radial forearm flap donor site grafted with an abdominal full thickness skin graft. The wound was infected with MRSA on removal of the dressings 7 days post-operatively (Fig. 2A).

Treatment consisted of dressings on alternate days with Manuka honey tulle, and local debridement of eschar when necessary. The wound healed without further complications 5 weeks later (Fig. 2B).

Discussion

The management of chronic wounds is often a frustrating and difficult task, particularly if they are infected with MRSA or fail to respond to normal management. The combination of antibiotic resistance and immunocompromised patients can make for a poor end result. Manuka honey tulle is a useful wound dressing, which maintains a moist wound environment and acts as an autolytic debriding agent where the wound has broken down and where there is necrotic tissue.

The mechanism of action is thought to be its chemical pH and osmotic effects,¹ which aid in its antibacterial actions.



Fig. 2. (A) Infected donor site in the radial forearm. (B) Radial forearm site healed after 5 weeks of Manuka honey treatment.

Research has also indicated that honey may possess anti-inflammatory activity and stimulate immune responses.

In vitro studies⁴ have shown increased release of tumour necrosis factor-alpha, interleukin-1beta and interleukin-6 with Manuka honey, and have suggested that the effect of honey on wound healing may be in part related to the stimulation of inflammatory cytokines from monocytes. These types of cell are known to have an important role in wound healing.

Honey dressings are now among our first line of treatment for early wound infections. No adverse reactions have been noted, even in diabetic patients.

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