Evaluation of a Honey dressing on wounds within Primary Care

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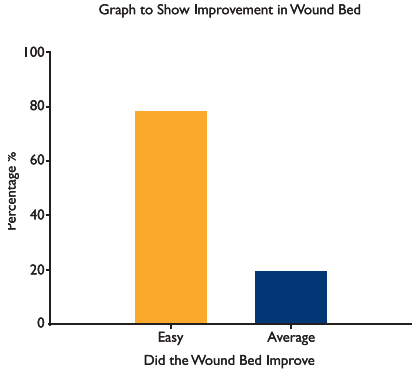
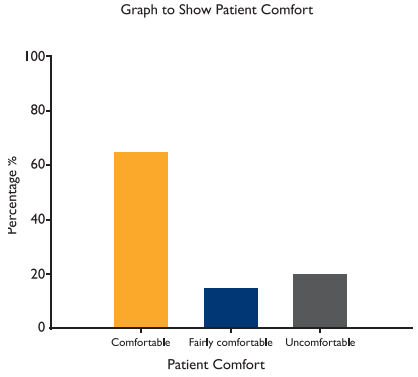
Introduction

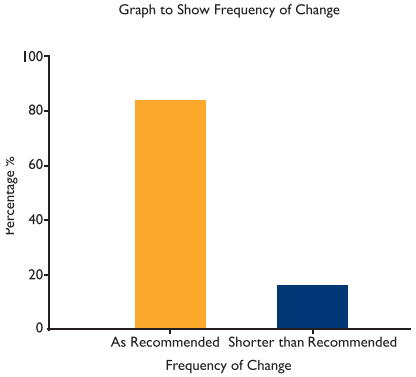
Honey dressings have been used as a topical treatment for infected wounds and can be effective on antibiotic resistant strains of bacteria (Dunford et al 2000). Honey has been used to treat burns (Efem 1988), venous leg ulcers, pressure ulcers, diabetic foot ulcers, donor sites, abscesses and boils (Betts & Molan 2001). Some honeys contain anti-bacterial phytochemicals, honey from Manuka have a high level of these (Allen et al 1991) and as such is amongst the highest potency honey available in the world. Manuka is the local Maori name for the New Zealand tea tree Leptospermum Scoparium. The anti-bacterial effects of Manuka honey are also assisted by the presence of hydrogen peroxide, an oxidising agent released by the action of the enzyme peroxidase which is added by bees to the nectar they collect (Molan 1992). Although Hydrogen Peroxide is at a very low level it is still an effective antibacterial agent. In 1989 Royal Society of Medicine stated "The therapeutic potential of uncontaminated pure honey is grossly under utilised. It is widely available in most communities; and although the mechanism of action of several of its properties remains obscure and requires further investigation, the time has come for conventional medicine to lift the blinds of this traditional remedy and give its due recognition", this care study seeks to help address the expressed opinion.

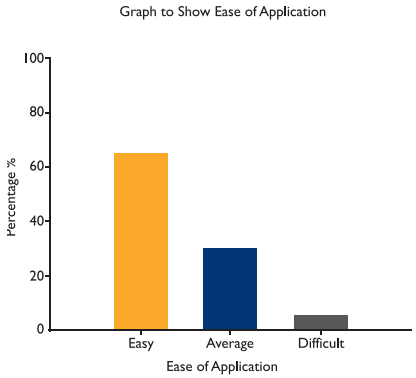
Method

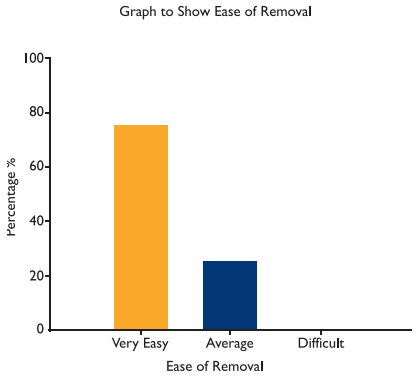
An evaluation has been undertaken in the three Worcestershire Primary Care Trusts with representation from each of the six community hospitals and each of the 9 areas within the county. The dressing is a sterile, non-adherent dressing impregnated with 20-25g of Manuka honey. It is applied directly to the wound and is secured with bandaging or film, possibly in conjunction with absorbent padding. Standard wound assessments, which consider the type of wound, classification of healing, wound position and size (see table right), the ease of application and removal, whether the dressing stayed in place, patient comfort and wound bed condition. Analysis is made of 20 patient episodes with statistical data presented in graphs. Three individual care studies are included and highlight the results seen within clinical practice.











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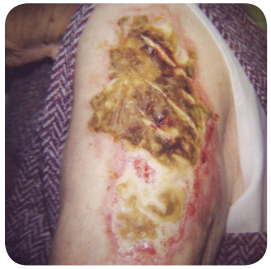
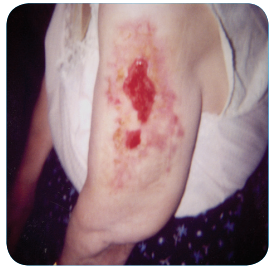
Patient	Allergies	Wound type	Wound classification	Wound position and size	Dressing previously used
1	None	Leg ulcers	Arterial leg ulcers	Left ankle right leg all round	Advance
2	History of reaction to some wound management products	Chronic leg ulcer			Intrasite comformable
3	None	Leg ulcers	Mixed ateology	Both lower legs	Aquacel soft-ban K-Plus
4	None	Ischaemic ulcer leg	Ulcer right lower leg		Mepilex Border
5	None	Leg ulcer	Venous leg ulcer	Right lower leg	N/A Dressing and Compression
6	Hydrocolloids	Ulcer to right foot	Venous ulcer	Right top of foot	Mepilex Border
7	None	Chronic leg ulcer	Sloughy infected mixed aeteology		Iodoflex
8	None	Leg ulcer	Venous leg ulcer	Gaiter area 5.5cm x 6.5cm	Flamazine
9	Very Sensitive to Granflex and Inadine	Foot and leg ulcer	Ulcer	Left outer foot 2cm x 2.5cm larger wound inner ankle up leg 13cm x 8cm	Inadine, Flamazine Carboflex Intrasight Granuflex
10	None known	Burn	Trauma	Left upper outer arm	
11	None	Traumatic skin tear		Left Leg	Granugel Allevyn
12	None		Sloughy Grade 2	Left ankle bone size 10 pence piece	Inadine
13		Burn left upper arm			Intrasite comformable
14	Iodine		Grade 2	Below left knee 6cm x 2cm	None
15	None	Haematoma drained	Grade 2		None
16	None	Superficial areas broken	Venous in origin	Front of both legs	4 layer bandaging
17	None	Superfical but extensive		Left leg 15cm x 20cm Right 30cm x 25cm	Intrasite, Flamazine, Actisorb silver Mepitel
18	None	Leg ulcer venous		Left lower leg 2cm x 3cm	Intrasite Allevyn
19	None	Trauma			Inadine as hospital instructed
20		Pressure ulcer		Foot	Allevyn Aquacell

Case study 1

Mrs A is aged 88 years and mobile. She sustained a burn on her left upper arm following a fall onto an electric fire. The area measured 20cm x 15cm and had been allowed to dry out. Initial treatment with hydrogel aimed to soften and promote autolysis in order to remove the eschar. Wound swab showed MRSA infection, which was treated systemically with Amoxacillin and Flucloxacillin. Mrs A found treatment distressing and following 12 days of Hydrogel treatment little progress had been made. The eschar remained dry causing the wound to be tight and painful. Mrs A agreed to try honey to promote the autolysis. Softening of the eschar was seen within a week and the wound was less painful. Within three weeks the wound was visibly debriding. Within ten weeks, total debridement had taken place and there were visible signs of large areas of epithelialisation. Mrs A found this dressing comfortable to wear and never experienced any pain following application.

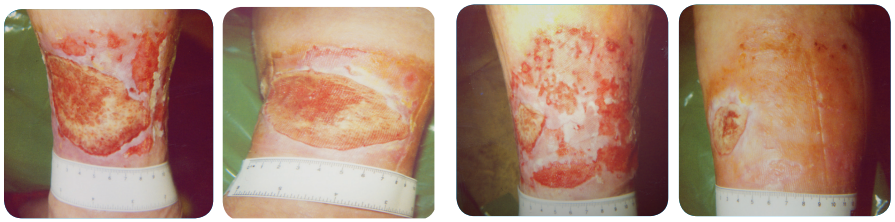




Case Study 2

Mrs H is aged 88 years with mixed aetiology lower leg ulceration for many years and has a history of Osteo-arthritis, psychotic episodes and is obese. Mrs H is registered blind and has been wheelchair bound for thirty years. There have been many episodes of non-concordance that have challenged both medical and nursing staff. The long standing ulcers on both of Mrs H's lower legs showed signs of deterioration despite the use of a modified compression regime and various appropriate topical dressings.

Activon® Tulle was applied to the ulcers on both lower legs and extended to cover all of the surrounding macerated skin. The Activon® Tulle dressing was easy to apply and remove but the initial application did cause a degree of discomfort and stinging (subsequent applications however yielded minimal discomfort according to Mrs H).

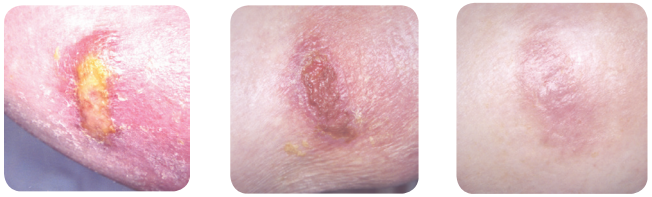


Left leg *Right leg*

Daily dressing changes took place initially, and then as the condition of both the ulcer beds and surrounding skin improved this was reduced to alternate days and eventually twice a week. Rapid improvement in the peri-wound skin was quite dramatic over the first four weeks with the initial affected areas of over 10cm square healing completely and improvement in the wound beds of each ulcer apparent. Overall the use of Activon® Tulle on Mrs H's ulcers and badly macerated surrounding skin was a great success during the first four weeks of application. All broken, macerated skin adjacent to both ulcers healed and the ulcer beds appeared much healthier.

Case Study 3

Mrs J is 89 year old; she was admitted for rehab following bilateral cellulitis, causing reduced mobility. She was obese and presented with small ulcer on her left calf, measuring 6cm x 2cm. Sloughy & minimal exudate with macerated peri – wound area. She was allergic to iodine. The use of honey was commenced and the wound healed in approximately 4 weeks.



Conclusion

Evidence from clinical practice needs to guide future practice and development, further evaluation of honey dressings is being undertaken within clinical practice and in-vitro. Honey dressings are unique, they have an osmotic action, anti-bacterial protection, malodour reduction, non-adherence and promote a moist wound healing environment. The only contra-indication identified to date is known allergy to honey, further investigation into pain management is required as patients may experience a drawing or stinging sensation in using honey. Those responsible for formularies for dressing selection should consider this product as an additional effective device for the management of wounds thereby addressing the issue of under utilisation of honey. The research and CE mark for this product has led its application for FP10 listing.

References

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