

Evaluation of a 100% Manuka honey (free of color additives and preservatives) in the debridement of diabetic foot ulcers versus a pharmaceutical chemical debrider and two other Manuka honey based products

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Problem statement

Diabetic ulcers can be really tough to debride secondary to the formation of fibrin in the base. It forms a web-like cover which is traditionally sharp debrided, but can reform very quickly with the slightest of pressure.

This study compares a chemical debriding agent against 3 different commercially available honey dressings. The 3 honeys have varying grades of purity.:

Honey 1- 80% Manuka honey

Honey 2- Contains 100% Manuka Honey

Honey 3- 100% pure Medical Grade Manuka Honey with no additives or preservatives.

Study Overview and Execution

Twenty clients, all with insulin dependent diabetes, ages 51-87, participated in the study. All had arterial competence established via toe pressures or arteriograms prior to study initiation; all had stable blood sugars, were infection free and were offloaded to prevent undue wound pressure. Five clients were included in each group. Each client had a wound which was a combination of slough and fibrin and was 100% covered and had minimal moisture. All had nutrition, hydration and pain also addressed. All wounds were cleansed with normal saline solution and pat dried. All were covered with a nickel thick amount of product and covered with a composite bordered pad. The chemical group was changed daily as per manufacturer's directions and the other three groups were changed every three days. Observations were noted every three days for all four groups for 15 days.

% of wound with slough / fibrin

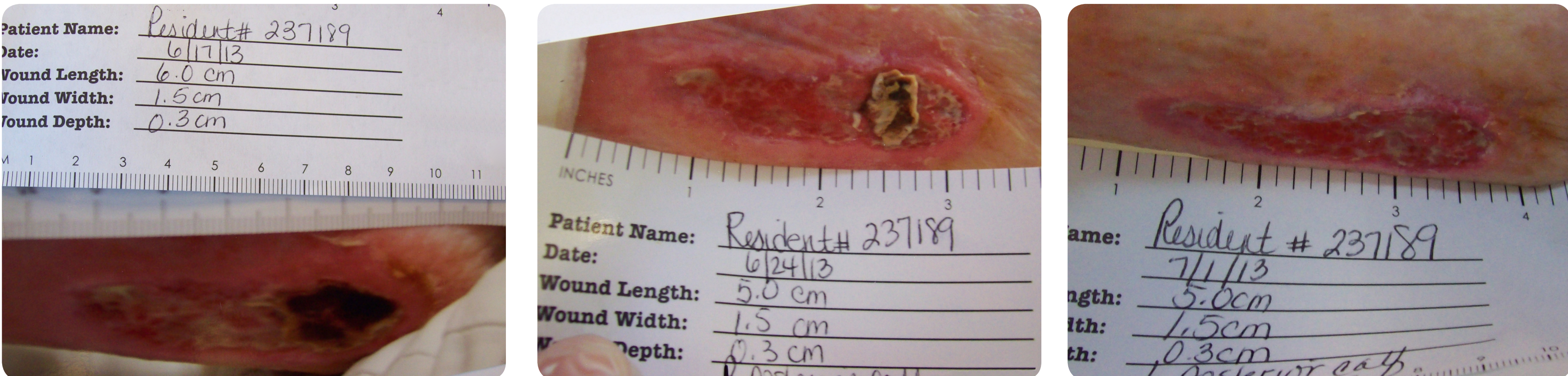
Client	Method	Day 1	Day 3	Day 6	Day 9	Day 12	Day 15
1	Chemical debriding agent	100% sl/fib	100%	100%	90%	90%	90%
2		100%	100%	100%	90%	80%	80%
3		100%	100%	100%	100%	90%	90%
4		100%	100%	100%	90%	90%	90%
5		100%	100%	100%	100%	90%	90%

Client	Method	Day 1	Day 3	Day 6	Day 9	Day 12	Day 15
6	80% Manuka honey	100% sl/fib	100%	90%	90%	80%	70%
7		100%	90%	90%	80%	80%	70%
8		100%	100%	90%	90%	90%	80%
9		100%	90%	90%	80%	80%	80%
10		100%	90%	90%	90%	90%	80%

Client	Method	Day 1	Day 3	Day 6	Day 9	Day 12	Day 15
11	Contains 100% Manuka honey	100% sl/fib	90%	90%	80%	80%	70%
12		100%	90%	90%	90%	80%	70%
13		100%	100%	90%	70%	70%	70%
14		100%	90%	90%	80%	80%	60%
15		100%	100%	100%	80%	70%	60%

Client	Method	Day 1	Day 3	Day 6	Day 9	Day 12	Day 15
16	100% preservative & color additive free Manuka honey	100% sl/fib	90%	70%	60%	20%	0%
17		100%	100%	90%	80%	40%	10%
18		100%	90%	80%	60%	40%	10%
19		100%	80%	60%	50%	30%	0%
20		100%	90%	80%	50%	30%	0%

100% pure Medical Grade Manuka Honey with no additives or preservatives



06/17/2013

06/24/2013

07/01/2013

Findings

- The rate and amount of debridement was found to vary significantly depending on the product used.
- The chemical debrider on all 5 patients was very slow to debride with almost 90% of slough / fibrin remaining at the end of the 15 day evaluation period.
- The honey products gave much better debridement but substantial differences were reported between the 3 types of honey.
- The only honey which was successful in achieving 100% debridement on any of the patients was the Honey which is 100% pure medical grade Manuka honey with no additives or preservatives.
- The rate of success of using a Manuka honey product to carry out debridement is very much dependent on having a 100% pure product with no additives or preservatives.

Conclusion

The 100% preservative and additive free Manuka Honey debrided the wounds more expediently than the other two Manuka Honey devices and the chemical debriding agent, when used in diabetic wounds with slough and fibrin.

*Special thanks to Kane Regional Scott for their participation in the study and to Square One Medical for the 100% preservative and color free Medical Grade Manuka honey (Activon, Advancis Medical), the contains 100% honey (Therahoney, Medline), the 80% honey (Medihoney, DermaSciences) and to UPMC pharmacy for the chemical debriding agent (Santyl, Healthpoint).