



SLOVAK HONEYDEW HONEY FOR TREATMENT OF THE LOWER LEG ULCERS



Viliam Slezák¹, Peter Takáč^{2,3} and Juraj Majtán^{2,4}

¹Department of Surgery, Faculty of Medicine, Slovak Medical University, Bratislava, Slovakia

²Institute of Zoology, Slovak Academy of Sciences, Bratislava, Slovakia. E-mail: juraj.majtan@savba.sk

³Scientica s.r.o., Bratislava, Slovakia

⁴Department of Microbiology, Faculty of Medicine, Slovak Medical University, Bratislava, Slovakia

Introduction

Honey is a popular natural product that is extensively used in the treatment of a broad spectrum of injuries, in particular chronic wounds. However, not all honeys exhibit equal antimicrobial potency and only a few of them meet the criteria for clinical usage.

Slovak fir honeydew honey produced in Medar apiary (Bardejov) has a potential to be another medical-grade honey. It exhibits a strong antibacterial, anti-biofilm, immunomodulatory and anti-inflammatory properties (reviewed in [1]). It has successfully been used for treatment of infected gluteo-femoral fistulas [2] and as a prophylactic agent of endophthalmitis [3].

Aim

The aim of the study was to characterise a clinical efficacy of sterilised honeydew honey in the treatment of the lower leg ulcers in 15 patients. Furthermore, we evaluated honey acceptability to patients in terms of pain and overall patient satisfaction.

Methods and Procedures

A total of 15 cases of leg ulcers treated with sterilized 100% honeydew honey were examined. The honey dressings were changed after 1-3 days depending on wound exudation. Each wound was assessed at the least three times in a time period of 3, 6 and 9 weeks. A full wound assessment was conducted at various points in the study. In addition, all patients were asked to record their subjective feelings (e.g. pain level) and overall satisfaction. Patients characteristics are displayed in Table 1.

Table 1. Patient characteristics

Age (years)	Mean	81
	Range	60 - 93
Gender	Male	7
	Female	8
Ulcer etiology	Arterial-Venous	11 (73%)
	Mixed	4 (27%)
Ulcer size (cm²)	Mean	49
	Range	4 - 132

Table 2. Patient drop-out rate

Reason	No.	%
Increasing ulcer pain	2	13
Deterioration in general health	0	0
Deterioration in ulcer condition	0	0
Death of patient	0	0
Adverse events	0	0

Results

Two of the 15 patients dropped out of the study due to increasing ulcer pain (Table 2). During the course of honey treatment the average total wound area of all patients decreased from 49 (4-132) to 21 (0-81) cm².

Overall, tolerance of honey was very good after 6 weeks of treatment. In 80% of all assessments the results were positive; in 7% there was no change in tolerance; and in 13% there were complaints of poor tolerance (patients dropped out of the study).

Honey-induced process of wound healing was also photo-documented in some cases (Figure 1).



Figure 1. Treatment of leg ulcers with honeydew honey before and after 3, 6 and 9 weeks (in case of Case#1). Honey was sterilized and applied to a depth of 3 mm (20 g of honey to a 10 x 10 cm area).

Conclusion

Taken together, honeydew honey is promising wound healing agent, represents an ideal inexpensive agent that meets all criteria to be therapeutically useful in treating chronic wounds.

References

- [1] Majtán J (Eds). (2012) Honey: Current Research and Clinical Applications. NovaScience Publisher, New York, USA, p. 222.
- [2] Vlcekova P, Krutakova B, Takac P, Kozanek M, Salus J, Majtán J. (2012) Alternative treatment of gluteofemoral fistulas using honey: a case report. International Wound Journal 9, 100-103.
- [3] Cernak M, Majtanova N, Cernak A, Majtán J. (2012) Honey prophylaxis reduces the risk of endophthalmitis during perioperative period of eye surgery. Phytotherapy Research 26, 613-616.

