The use of honey in chronic leg ulcers: a literature review

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CRD summary
The authors of this review concluded that further research is needed to clarify the role of honey as a first-line treatment for chronic leg ulcers. Although the review had a number of limitations, this recommendation appears appropriate given the paucity of the research identified.

Authors' objectives
To assess the antibacterial effects of topical honey for the treatment of chronic leg ulcers.

Searching
MEDLINE, EMBASE, CINAHL and the Cochrane Library were searched for publications from 1980 to 2004; the search terms were provided. The Internet was also searched, including the website of the University of Waikato Honey Research Unit (up to 20 February 2004).

Study selection
Study designs of evaluations included in the review
Both randomised and non-randomised clinical trials were eligible for the review.

Specific interventions included in the review
To be eligible, studies needed to compare the use of honey dressings with other dressing agents. However, one of the included studies did not compare honey dressings with other alternative dressings.

Participants included in the review
To be eligible, studies needed to be of patients with chronic leg ulcers. However, one of the studies included in the review also included other types of wounds.

Outcomes assessed in the review
The main outcomes assessed were the healing times of wounds and the number of wounds, initially with bacterial growth, which were rendered sterile by the use of honey.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The studies were assessed for their potential for bias according to criteria outlined in the Cochrane Reviewers’ Handbook (version 4.2.1). The authors did not state how the validity assessment was performed.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative summary.
How were differences between studies investigated?
Differences between the studies were discussed in a very limited way in the report.

Results of the review
Two non-randomised trials (n=110) were included in the review.

Both studies included in the review were susceptible to different sources of bias. Methodological limitations included lack of blinding, poor reporting of quality and small sample size.

One study compared topical honey with phenytoin and a phenytoin-honey mixture in a sample of 50 cases of leg ulcers over a period of 4 weeks. No statistically significant differences were noted between treatments.

The second study evaluated the use and safety of a honey-medicated dressing in 60 patients with chronic, complicated surgical or acute traumatic wounds. This study used a wide range of dressing agents in an initial group of 13 patients with chronically non-responding wounds, was not limited to leg ulcers alone, and honey was not compared with any other wound dressing agents. In all but one patient honey was found to be easy to apply, helpful in cleaning the wounds and without side-effects.

The report included the results of further studies that did not meet the inclusion criteria for the review. Therefore, these have not been extracted.

Authors' conclusions
Further research is needed to clarify the role of honey as a first-line treatment for chronic leg ulcers.

CRD commentary
The review question had stated inclusion criteria for the participants, interventions, outcomes and study designs. However, studies that did not meet the criteria were included and reported in the review. The searches encompassed a range of databases, although it was unclear if foreign language publications were eligible for inclusion. It also appeared that unpublished material was not included, opening up the possibility of publication bias where studies with null or negative results are less likely to be published. Study validity was assessed, although the procedure for this and other review processes were not described in full; it is therefore impossible to judge if any bias was introduced into the review. Study details were very limited so it is difficult to verify the authors' conclusions. Despite the limitations of the review, the recommendation for further randomised clinical trials appears appropriate given the paucity of the research identified.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that there is a need for randomised controlled trials supporting the use of honey as an alternative to conventional dressing agents for chronic leg ulcers. They also mentioned the need for laboratory studies on the cellular effects of honey.

Bibliographic details

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Subject indexing assigned by CRD

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.