TITLE: Acetic Acid for Wound Care: Clinical Effectiveness and Guidelines

DATE: 07 December 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of acetic acid for wound care?

2. What are the evidence-based guidelines regarding the use of acetic acid for wound care?

KEY FINDINGS

Two evidence-based guidelines were identified regarding the use of acetic acid for wound care.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and November 26, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.
Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients of any age with wounds or skin issues (e.g., open wounds, infected wounds, exoriation, rashes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Acetic acid</td>
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<tr>
<td>Comparator</td>
<td>Q1: Standard of care (e.g., alternate dressings, creams, ointments, powders, oral antibiotics), no comparator</td>
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<td></td>
<td>Q2: No comparator</td>
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<tr>
<td>Outcomes</td>
<td>Q1: Clinical benefits and harms (e.g., impact on wound healing, cytotoxicity)</td>
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<td></td>
<td>Q2: Evidence-based guidelines</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
</tr>
</tbody>
</table>

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two evidence-based guidelines were identified regarding the use of acetic acid for wound care. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Evidence-based guidelines were identified regarding the use of acetic acid for treating pressure ulcers\(^1\) and venous leg ulcers\(^2\). Both guidelines\(^1,2\) caution that there is a risk of acidosis when acetic acid is used as a topical antiseptic for an extended period of time and over a large wound surface area. More generally, the guideline regarding pressure ulcers\(^1\) recommends considering the use of non-toxic topical antiseptics for a limited, yet unspecified time period, to control bacterial bioburden. For venous leg ulcers, the identified guideline\(^2\) recommends that a topical wash of 3% acetic acid be considered to reduce the burden of *Pseudomonas*, when other interventions have failed, are unavailable, or were ineffective. However, the guideline regarding venous leg ulcers\(^2\) also cautions that the use of acetic acid at high concentrations has been found to cause pain and skin irritation at the ulcer site. This guideline\(^2\) states there is no concentration of acetic acid that is toxic to bacteria but is not toxic to fibroblasts.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Guidelines and Recommendations

   See: Section on Assessment and Treatment of Infection and Biofilm: Treatment, bullet 4; Potential Harms

2. Australian and New Zealand clinical practice guideline for prevention and management of venous leg ulcers. 2011
   See: 8.3.4 Other topical antimicrobials, pages 43-44

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APPENDIX – FURTHER INFORMATION:

Randomized Controlled Trials

Protocol Only


Non-Randomized Studies

Acetic Acid in Combination with Another Treatment


Case Reports


Review Articles

7. Wound Healing and Management Group, Watts R. The Joanna Briggs Institute (JBI). Wound management antiseptics-acetic acid (low resources communities); 2015 Subscription required