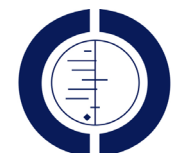




The
Global
Evidence
Mapping
Initiative

PUTTING
RESEARCH INTO
CONTEXT

SILVER-BASED PRODUCTS & BURNS



AUSTRALASIAN
COCHRANE CENTRE

EVIDENCE SUMMARY

In the early management of minor burn injury, do silver based products improve burn infection control and healing?

There is not enough evidence to decide whether silver based products improve healing, infection control, pain or other outcomes in people with minor burns.



Inclusion/exclusion criteria

Studies

Systematic reviews, evidence-based clinical practice guidelines, health technology assessments and primary studies.

Participants

Included: People of any age sustaining a minor burn injury due to heat.

Excluded: Burns due to chemicals and radiation.

Phase of care

Included: Pre-hospital care setting (i.e. initial medical care given by a paramedic or other person before the patient reaches the hospital) OR medical care given in an emergency department (ED) OR primary care.

Excluded: any care given outside of the ED in a hospital setting (i.e. following admission to a hospital ward or discharge).

Intervention

Any silver-based product available in an emergency or pre-hospital setting (eg silver sulfadiazine (SSD) 1% cream, silver nitrate solution).

Outcomes

Primary: Rates of infection and time to wound healing.

Secondary: Cosmetic results, pain, wound adhesion, cost, withdrawals, preference.

Results

Included studies

- One prospective randomised controlled trial (Cockington 1989) in 39 children was identified which compared the effects of 1% SSD cream, Op-site (polyurethane dressing) and Jelonet (paraffin impregnated gauze) for minor burns (most were partial skin thickness burns) in an ED setting. The study was poorly conducted and reported, and has a high risk of bias. As such, the results should be interpreted with caution.

Findings

- There were no significant differences in wound healing or infection using SSD and Op-site, but with Jelonet there was a significantly higher rate of infection, and wound adhesion rates may also have been higher.
- Pain relief, assessed as the need for additional analgesia, was similar between treatment groups, although nurses undertaking the initial burn dressing suggested that Op-site provided more rapid pain relief than either SSD or Jelonet.



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National Trauma Research Institute



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Findings (continued)

- All three treatments provided satisfactory cosmetic results, with no differences reported between groups, nor were there significant differences between groups for withdrawals or intervention cost.
- Authors note that the treating nurses preferred Op-site over the other two treatments, leading to termination of the trial.
- Neither numerical data nor detailed statistical analyses supporting the results of this study were reported, and all results should be interpreted with caution.

Authors' conclusions

What the evidence tells us

There is insufficient evidence to decide whether silver-based products improve outcomes for minor burns treated in emergency settings.

Implications for practice

Despite the lack of evidence for a beneficial effect of topical silver in minor burn wounds, clinicians are increasingly confronted with a multitude of dressing types to which silver has been added. While bacterial resistance to silver remains a rarity, the potential for this to occur is an added incentive to clarify the indications for the use of such products.

Implications for research

As silver is likely to add to the expense of a dressing, and may be associated with delayed wound healing, trials to determine whether any additional benefits is conferred by the addition of silver, are required.

Search for evidence

A systematic search for evidence was conducted on 22nd February 2009 in the following databases: Cochrane, Medline and Embase.

Included study

Cockington, R. A. (1989). *Ambulatory management of burns in children*. *Burns*, 15(4), 271-273.