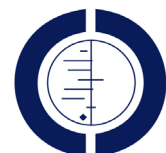




The  
Global  
Evidence  
Mapping  
Initiative

PUTTING  
RESEARCH INTO  
CONTEXT

# EARLY BURN PAIN MANAGEMENT



AUSTRALASIAN  
COCHRANE CENTRE

## EVIDENCE SUMMARY

### In the early management of minor burn injury, what is the optimal form of pain control?

Results from a single trial suggest that use of topical morphine sulphate is not effective in reducing pain caused by superficial burns.



## Inclusion/exclusion criteria

## Results

### 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

Topical or systemic therapeutic agents; or non-pharmacologic approaches (e.g. hypnotherapy).

### Outcomes

Severity of pain.

### Included studies

- One study met the inclusion criteria, a controlled trial of 49 adults with superficial burns randomised into three groups; Intralite gel mixed with morphine, Intralite gel mixed with sterile water and Jelonet dressing covered with gauze.
- No significant difference in Visual Analog Scale (VAS) median pain scores were observed for all three groups at four time intervals (i.e. baseline, 2, 6 and 12 hours).
- There was no significant difference in all three treatment groups with regards to total analgesia administration (oral and topical).



### Authors' conclusions

#### Table

Topical or systemic therapeutic agents; or non-pharmacologic approaches: effects on pain control

Author, Date, Country	Patient Group	Study Type	Outcomes	Key Results	Study Weakness
Welling 2007, United Kingdom	49 adult patients with superficial burns.  Jelonet gel vs. Intrasite gel with morphine vs. Intrasite gel with sterile water	Randomised controlled trial	VAS Pain scores recorded at four time points (i.e. baseline, 2h, 6h & 12h)  Total amount of analgesia administered in the ED & after discharge	No significant difference in the reduction of pain in all 3 treatment groups at all 4 time points.  No significant difference reported for all groups.	Small sample size  No intention to treat analysis  Blinding not possible for Jelonet dressing patients

#### What the evidence tells us

Topical morphine sulphate is not effective in providing pain relief for burns.

#### Implications for practice

Although this was the only study identified for pain management in minor burns, other treatments could also be considered. Application of first aid in the form of cool running water is well recognized to have an analgesic effect, however, the optimum temperature and duration of treatment is not established. The popularity of silver sulphadiazine cream as a primary burn wound treatment is in large part based on its analgesic effects, which however have not been examined formally. It is possible that other wound applications, such as various hydrogel products are effective analgesics, and many are promoted as such. Topical local anaesthetics may also be effective, and require clinical testing.

#### Implications for research

Overall, there is insufficient evidence on the use of pharmacological interventions for pain relief in superficial burns in the pre-hospital and ED setting. Evidence on the use of analgesic agents in other settings may be relevant to burns care. Further large well-designed studies 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

Welling A. A randomised controlled trial to test the analgesic efficacy of topical morphine on minor superficial and partial thickness burns in accident and emergency departments. *Emergency Medicine Journal* 2007;24(6):408-12.