

# An open, parallel, randomized, comparative, multicenter study to evaluate the cost-effectiveness, performance, tolerance, and safety of a silver-containing soft silicone foam dressing (intervention) vs silver sulfadiazine cream

Silverstein P. et al. Journal of Burn Care & Research. 2011;32(6): 617-26

## Aims

To compare the incremental costs (direct and indirect) and healing outcomes of Mepilex® Ag with silver sulfadiazine (SSD) cream and to compare the two treatments in terms of their performance, tolerance, and safety, including pain.

## Method

Trial-based (multicenter, randomized controlled trial) economic evaluation study from the perspective of a healthcare provider.

Partial-thickness thermal burns patients who met the inclusion criteria were randomised to one of two intervention groups:

1. Mepilex® Ag
2. Silver sulfadiazine cream (Silvadene®)

## Results

### Clinical outcomes

There was no statistical difference between the two groups with regard to the average of healing time:



The Mepilex® Ag group had reduced hospital stay vs SSD ( $p=0.034$ ).

### Health costs and resources used

Difference in total mean cost of therapy per patient was statistically significant between the two groups ( $p<0.001$ ):



Mepilex® Ag required less dressing changes than SSD (2.24 vs 12.4).

### Pain

Mepilex® Ag was associated with less pain during dressing application ( $p=0.018$ ) and during wear ( $p=0.048$ ) compared to SSD at the end of week one.

Infectious complications were similar in the two treatment groups.

**Mepilex® Ag proved to be as effective as silver sulfadiazine on healing time for the treatment of partial-thickness thermal burns. Mepilex® Ag was associated with reduced hospital stay, decreased pain, lower costs and ease of application compared to SSD.**

# Additional useful information

## Outcomes measured

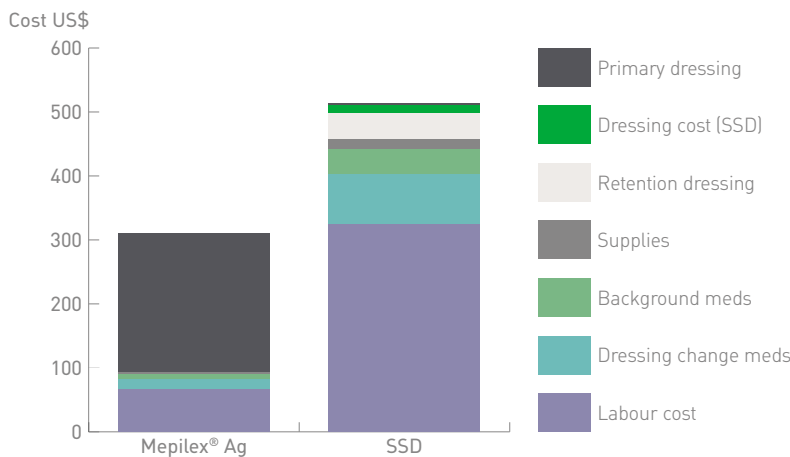
- The investigator made a subjective assessment of treatment efficacy at each formal assessment (excluding baseline) using a ranking system in terms of:
  - percentage of healing
  - ease of application
  - patient anxiety and pain during dressing changes (John Hopkins visual analogue scale)
  - dressing adherence to the wound bed and bleeding on dressing removal
  - flexibility and conformability of the dressing
- Patients recorded pain at dressing change, during wear and during application (Wong Baker Faces scale - for children, Johns Hopkins visual analogue scale - for adults) and rated their apprehension during dressing change, ease of movement, stinging or burning during dressing wear.
- Microbiological swabs were taken at baseline and subsequently as required.
- Time to discharge was recorded.
- Cost-related data were recorded at each dressing change.

## Additional results

- 100 patients were randomised:
  - Mepilex® Ag (n=49)
  - SSD (n=51)

## Health costs and resources used

Total cost of care for Mepilex® Ag and SSD treatment groups:



Cost-effectiveness for each treatment regime:

	Mepilex® Ag (n=47)	SSD (n=51)
Total cost of care (US\$), mean (SD)	309 (144)	514 (282)
Full re-epithelialisation in 21 days, n (%)	38 (78.3)	34 (66.2)
Average cost-effectiveness (US\$) (95% CI)*	395 (344–450)	776 (659–892)
Incremental cost-effectiveness ratio (US\$)**	-1688	

\*Calculated from the total cost of care, divided by the proportion of patients with full re-epithelialisation.

\*\*Calculated from the difference in total cost of care, divided by the difference in the proportion of patients with full re-epithelialisation.

## Ease of use

Clinicians considered Mepilex® Ag to be superior to SSD in terms of ease of application (p=0.028) and flexibility (p=0.038).