



Title	VenUS II: A Randomized Controlled Trial of Larval Therapy in the Management of Leg Ulcers
Agency	NETSCC, HTA, NIHR Evaluation and Trials Coordinating Centre Alpha House, University of Southampton Science Park, Southampton, SO16 7NS, United Kingdom; Tel: +44 2380 595 586, Fax: +44 2380 595 639; hta@soton.ac.uk, www.hta.ac.uk
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Aim

To compare the clinical and cost effectiveness of larval therapy with a standard debridement technique (hydrogel) in treating sloughy and/or necrotic venous leg ulcers.

Conclusions and results

Between July 2004 and May 2007 the trial recruited 267 people aged 20 to 94 years at trial entry. Female participants outnumbered male participants. The nurse classified most ulcers as having an area exceeding 5cm². To test the difference over time of Kaplan-Meier curves for the 3 treatment arms, the log rank test was used to compare the distribution of the cumulative times to healing. The difference in the distribution of cumulative healing between the individuals in the 3 arms was not statistically significant at the 5% level. We then adjusted for stratification and prespecified prognostic factors (center, baseline ulcer area, ulcer duration and ulcer type). We found no difference in healing rates between the loose and bagged larvae arms in this model. Results for larvae (loose and bagged pooled) compared with hydrogel showed no evidence of a difference between arms in time to healing. The same analytical steps were used to investigate time to debridement. Larvae-treated ulcers debrided significantly more rapidly than hydrogel-treated ulcers, but the difference in time to debridement between loose and bagged larvae was not significant (Cox proportional hazards model). The adjusted analysis reported the hazard of debriding at any time for those in loose and bagged larvae groups as approximately twice that of the hydrogel group. No differences in health-related quality of life or bacteriology were observed between trial arms. Larval therapy was associated with significantly more ulcer-related pain than hydrogel. Our base case economic evaluation showed large decision uncertainty associated with the cost effectiveness of larval therapy when compared with hydrogel, with a 50% probability of the larval therapy being cost effective. Hence, our findings suggest that

larval therapy could be as effective and costly as hydrogel therapy.

Recommendations

Compared to hydrogel therapy, larval therapy significantly reduced the time to debridement of sloughy and/or necrotic, chronic venous leg ulcers. However, larval therapy did not significantly increase the rate of ulcer healing. Regarding cost effectiveness, it was impossible to distinguish between larval therapy and hydrogel.

Methods

A pragmatic, 3-armed, randomized controlled trial with an economic evaluation recruited participants from community, district-nurse-led services, community leg-ulcer clinics, and hospital outpatient leg-ulcer clinics in a range of urban and rural settings.

Further research/reviews required

Further research is required to investigate the association of debridement and healing and ulcer microbiology and healing. The importance of debridement as a clinical outcome for patients and nurses should also be investigated. Exploration of the impact of informative censoring on cost effectiveness, ie, using multistate models to estimate the transition probabilities of different events of interest (debridement, healing, amputation, and/or death) should be conducted.