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| Title | Artificial Skin Grafts in Chronic Wound Care: A Meta-analysis of Clinical Efficacy and a Review of Cost Effectiveness |
| Agency | CADTH, Canadian Agency for Drugs and Technologies in Health Suite 600, 865 Carling Ave, Ottawa, ON K1S 5S8, Canada; Tel: +1 613 226 2553, Fax: +1 613 226 5392; publications@cadth.ca, www.cadth.ca |
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Aim

To examine the clinical safety, efficacy, and cost effectiveness of artificial skin grafts for patients with chronic skin wounds such as diabetic foot ulcers and venous leg ulcers.

Conclusions and results

Twenty-three reports describing 17 RCTs and 6 economic studies were reviewed.

The results of clinical trials show that artificial skin grafts promote wound closure, resulting in more frequent and more rapid healing of chronic diabetic foot ulcers, when compared with standard therapy. Evidence is limited concerning clinical efficacy of artificial skin grafts used for venous leg ulcers. In the short term, the use of artificial skin leads to increased costs. After one year, however, its clinical effects may result in net savings.

Recommendations

Not applicable.

Methods

Published literature was obtained by using a defined strategy to search multiple databases and by hand searching the bibliographies of selected papers. A meta-analysis of RCTs was performed to compare standard care alone versus the clinical outcomes for artificial skin use plus standard care.

The proportion of patients who had complete wound healing (CWH) with or without an artificial skin graft was summarized over different time frames (for all types of ulcers), for venous leg ulcers and diabetic foot ulcers separately, and for Dermagraft and Apligraf separately. The time to healing and the incidence of adverse events were summarized from clinical trials. The economic consequences of using artificial skin products in venous leg ulcers and diabetic foot ulcers were examined.

Further research/reviews required

More trials are needed to provide enough data to confidently evaluate other skin graft products.