

Journal watch

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Edmonds M, Lázaro-Martínez JL, Alfayate-García JM, Martini J, Petit JM, Rayman G, Lobmann R, Uccioli L, Sauvadet A, Bohbot S, Kerihuel JC & Piaggese A. Sucrose octasulfate dressing versus control dressing in patients with neuroischaemic diabetic foot ulcers (Explorer): an international, multicentre, double-blind, randomised, controlled trial. *The Lancet: Diabetes and Endocrinology*, 2018; 6(3):186-196. DOI: 10.1016/S2213-8587(17)30438-2

Neuroischaemic diabetic foot ulcers (DFUs) are challenging wounds associated with both peripheral neuropathy and arterial disease. DFUs have a high incidence of infection and often lead to lower limb amputations, however to date no satisfactory treatment has been available and no evidence supports the use of any one particular dressing. In this paper, the “Explorer study” is described which was a randomised, double-blinded controlled study, across 43 different hospitals in Europe, involving 240 diabetic patients with non-infected neuroischaemic DFUs. The Explorer study assessed the use of sucrose octasulfate dressings vs control dressings (same dressings without sucrose octasulfate) for a period of 20 weeks. The same standard of clinical care was provided to both groups and frequency of dressing changes were based on the clinical condition of the wounds. The primary outcome was the proportion of patients with wound closure at week 20. The results of the study clearly demonstrated that sucrose octasulfate dressings improved wound closure of neuroischaemic DFUs (48% wound closure at 20 weeks) compared to control treatment (30% wound closure at 20 weeks) without no effect on safety after 20 weeks of treatment compared to standard care. Additionally, patients treated with sucrose octasulfate dressings reported a lower incidence of adverse events, including infections of targeted wounds, (20% of patients’ vs 28% in control dressing group). A very low percentage of minor amputations and deaths were also reported in both treatment groups however these were not as a result of the treatment, procedure, wound progression or following amputation. The authors concluded that these findings support the use of sucrose octasulfate dressings as a local treatment for neuroischaemic DFUs.

Treadwell T, Sabolinski ML, Skornicki M & Parsons NB. Comparative Effectiveness of a Bioengineered Living Cellular Construct and Cryopreserved Cadaveric Skin Allograft for the Treatment of Venous Leg Ulcers in a Real-World Setting. *Advances in Wound Care*, 2018; 7(3):69-76. DOI: 10.1089/wound.2017.0738

Venous leg ulcers (VLUs) account for 70-90% of lower extremity ulcers and effective treatment of these ulcers

is time-consuming and greatly dependant on appropriate assessment of the ulcer and the patient. While a variety of biological therapies are available for treatment of VLUs; including skin substitutes which are often used as adjunct to compression therapy; the data on real-world comparative effectiveness which can help guide decisions around treatment approach for VLUs are lacking. Different from control clinical trials, real-world studies demonstrate the extent to which a treatment is effective in the usual clinical setting. This study is the first comparative effectiveness analysis to evaluate the use of two different skin substitute technologies for treatment of hard to heal VLUs including: bioengineered living cellular construct (BLCC) which contains human neonatal keratinocytes and fibroblasts in an ECM matrix; and cryopreserved cadaveric skin allograft (CCSA). While both of these substrates contain living cells and promote healing via generation of cytokines and growth factors the difference includes presence of neonatal cells in BLCC and living cells from donated tissue in CCSA which may have higher degree of variability. A total of 799 wounds were treated in 177 wound care facilities in USA (BLCC n = 688; CCSA n = 111) with primary analysis including percentage of VLUs achieving closure by 12 and 24 weeks as well as median time to closure in both treatment groups. Wounds that closed >40% within 28 days before treatment were excluded. Findings showed that BLCC treatment significantly accelerated the median time to wound closure (15.1 weeks vs 31.3 weeks with CCSA) from a Cox regression model with terms of treatment, patient age at treatment and baseline wound area, duration and depth. Additionally, 65% of BLCC treated VLUs healed compared to 41.4% in CCSA treated group at 24 weeks leading the authors to conclude that there is a significant clinical and cost saving benefit with the use of the BLCC. These findings reaffirm the results of a RCT which evaluated the use of BLCC for the treatment of VLUs.

Serra R, Ielapi N, Barbetta A & De Franciscis S. Skin tears and risk factors assessment: a systematic review on evidence-based medicine. *International Wound Journal*, 2017, 15(1):38-42. DOI: 10.1111/iwj.12815

Skin tears are common wounds on fragile exposed skin often encountered in elderly, disabled population and neonates. These authors present a systematic review of the main risk factors that contribute to the development of skin tears to facilitate physician and nurse awareness in recognising these factors and implementing care strategies to minimise risks for high risk patients. Of the 166 records in the search

criteria, 24 matched the inclusion criteria and were assessed. The main risk factors associated with the development of skin tears included: age-related skin changes, dehydration, malnutrition, sensory changes, mobility impairment, pharmacological therapies and mechanical factors related to skin care practice. The authors suggest that prevention should start with early identification of at risk patients and identify the stratification risk as the main prevention strategy and effective tool in avoiding the development of chronic wounds. The authors conclude that identification of risk

factors and adaptation of correct techniques during skin care practice could reduce or even avoid the onset of skin tears in elderly, disabled populations and neonates.



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