

A case series evaluating the geko™ neuromuscular electrostimulation device on lower limb wounds of differing aetiology

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Abstract

The geko™ is a disposable neuromuscular electrostimulation (NMES) device intended to increase blood circulation and promote wound healing in a range of lower limb conditions. The purpose of this case series was to evaluate the therapeutic effect of the geko device on wound healing outcomes over an 8-week period. Thirty patients with non-healing wounds (\geq 12-week duration) of either venous leg ulceration (VLU), mixed leg ulceration (MLU) or diabetic foot ulceration aetiology were recruited from a local outpatient wound clinic in the South Wales area. Over the 8 weeks 2 participants (8%) achieved complete re-epithelialisation between baseline and endpoint. Mean wound surface area decreased (7.6 cm²) and there was an increase of 21% in the mean percentage of granulation tissue in the wound bed. Pain levels reduced in 52% of patients who completed the study, but the extent of oedema reduction was difficult to establish given that 76% of the cohort were treated with a form of compression as part of standard care. The findings support the use of the therapy in patients with painful VLUs and MLUs, but further research needs to be conducted to establish the generalisability of the findings to the wider population of patients living with chronic wounds of differing aetiology in the lower limb.