The feasibility of using a novel electrical stimulation device for painful hand burns.

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Background: Poorly controlled pain following burn injury has been linked to reduced quality of life and psychological adjustment, and increased risk of later developing chronic pain. Transcutaneous electrical nerve stimulation is used successfully in a range of conditions and may also have the potential to reduce pain and analgesic consumption for burns patients. However, the additional burden of learning and using new technology in the stressful burns environment may limit motivation of patients and staff.

Aims: The purpose of this study was to determine the feasibility of engaging patients and staff to use a novel electrical stimulation device for self-management of pain during burn care.

Method: In a single case experimental design, patients with <4% TBSA partial thickness hand burns were recruited to use the electrical stimulation device at home and during dressings for up to 14 days. Data collected included visual analogue scale measures of pain, anxiety, ease of use, confidence and motivation to use the device. Measures were taken with staff and participants before and after dressings and in a daily patient diary. Observational assessment of motivation using the Volitional Questionnaire was conducted during wound care procedures.

Results: Data analysis demonstrated feasibility in these cases, and revealed insights into the motivational issues that may influence the introduction of this method of pain self-management in the burns environment.

Conclusion: Feasibility and further plans to study efficacy will be discussed, along with implications for the introduction of this novel electrical stimulation in a burn care environment.

Key Words

Hand, burn, pain, electrical stimulation, motivation

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