

Dunn Factors associated with positive outcomes in 131 patients treated with gauze-based Negative Pressure Wound Therapy

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Abstract

Negative Pressure Wound Therapy (NPWT) is commonly used in many surgical specialties to improve wound management and healing outcomes. This study reports the ability of gauze-based NPWT to address several treatment goals commonly defined at the onset of therapy. A prospective, multi-center, non-comparative clinical investigation was carried out using gauze-based NPWT in chronic and acute wounds. 131 patients including traumatic, post-surgical and chronic wounds were assessed. Weekly percentage reductions in wound area, depth and volume were 8.3%, 15.8% and 20.5% respectively ($p < 0.001$). A reduction in exudate level was observed from baseline to treatment discontinuation ($p < 0.001$). An increase ($p = 0.007$) in red granulation tissue and a decrease ($p < 0.001$) in non-viable tissue was observed. Baseline wound characteristics associated with slower rates of progress included chronic wound aetiologies, longer wound duration prior to NPWT and presence of diabetes as a co-morbidity. Important indicators of wounds which had improved sufficiently and no longer required NPWT included reduction in volume and exudate levels. Gauze-based NPWT can be used to address many of the treatment goals commonly defined at the onset of therapy including reduction in wound volume, management of exudate and infection status, and improvement in wound bed quality.

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