Negative Pressure Wound Therapy System with a Wound Interface Dressing Technology

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Background:
Negative pressure wound therapy (NPWT) has been on the market since the 1990's. NPWT uses sub-atmospheric pressure to remove fluid from the wound bed to assist in wound healing. Patient discomfort and potential wound bed disruption at dressing changes are known complications with NPWT.[1]

Recently, an NPWT device with wound interface dressing technology* became available. This system relies on a wound dressing technology of non-woven polyester layers joined by a silicone elastomer with a non-adherent contact surface. The device is designed to provide optimal tissue micro-strain with safe levels of suction at -75 mmHg. The non-adherent interface is designed to minimize pain, and tissue disruption upon dressing removal. These case studies examine the use of this NPWT system in patients with diabetic foot ulcers and venous leg ulcers.

Methods:
Four high risk, complicated patients were selected with non healing ulcers of the lower extremity. Patients were followed up to eight weeks, with up to three dressing changes per week. At dressing change, patient data was captured including pain level and wound characteristics.

Results:
These patients showed healthy granulation tissue formation and minimal tissue disruption upon dressing application and removal. The incidence of ulcer closure and time spent in preparation of therapy were comparable to our experience with other NPWT devices. No incidences of infection were reported

Conclusion:
In this study, the NPWT utilizing wound dressing interface technology was demonstrated to be safe, effective and associated with patient satisfaction. The results found were similar to those experienced by the authors with other NPWT devices on the market.

1. Borgquist O, Gustafsson L, Ingemansson R, and Malmsjö M. Tissue ingrowth into foam but not into gauze during negative pressure wound therapy. *Wounds*. 2009; 21(11): 302-309.

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