ACCELERATED WOUND HEALING BY USE OF COMBINED NEGATIVE PRESSURE WOUND THERAPY AND INTERMITTENT PNEUMATIC COMPRESSION

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Negative pressure wound therapy (NPWT) and intermittent pneumatic compression (IPC) have traditionally been used in patients with chronic complicated non-healing wounds. The aim of this study (case series) was to describe the use of NPWT in combination with IPC in patients with relatively short history (2-6 months) with ulcers. For comparison two patients with longstanding non-healing venous ulcers were included. 11 patients were treated for a period of 4 weeks, two weeks as inpatients followed by two weeks as outpatients. NPWT was applied and changed three times per week and IPC was used two times daily (1-2 hours, 40-60 mmHg). Wound diagnoses were venous (7 patients), combined venous and arterial (3 patients) and pressure ulcers (1 patient). Wound healing and edema were measured once a week together with patient compliance. All wounds showed improved healing during the treatment period with marked or moderate reduction in ulcer size and granulation tissue formation was markedly stimulated. Edema was markedly reduced due to IPC. The two patients with very chronic wounds showed improvement during treatment, but stagnation on cessation of treatment. Treatment was generally well tolerated.

The results of the present study indicate that combined NPWT and IPC can accelerate wound healing and markedly reduce edema thus shorten the treatment period. As a consequence patients may have a shorter healing period and may be protected from entering a chronic wound phase. However, further studies are needed in order to show the long term effect of a more accelerated treatment course.