

TOPICAL NEGATIVE PRESSURE (TNP) THERAPY IS SUPERIOR TO CONVENTIONAL DRESSING THERAPIES IN PATIENTS WITH CHRONIC WOUNDS. A META-ANALYSIS

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Aim: To determine the effectiveness of topical negative pressure* versus conventional dressing therapy in patients with severe chronic wounds (pressure ulcers, diabetic foot ulcers or leg ulcers) by statistical pooling of the results.

Methods: We performed a systematic search (all years thru 2008) in electronic medical and nursing databases and trial registers. Search terms used in all databases for TNP therapy* were according to the Cochrane Wounds Group Specialised Trials Register. These terms were connected to the study type of interest and outcome measure (either healing to 100% epithelialisation or eligibility for surgical closure).

- Selection of studies - Two reviewers screened all abstracts independently. Studies had to include outcome comparison with a randomised comparison group.
- Exclusion criteria: (1) animal studies, (2) advanced wound healing accelerating techniques as comparison group, (3) home made constructions to apply topical negative pressure, and (4) not officially and fully documented in a journal or report.

Results: A total number of 12 RCT's and one randomised clinical cross over trial were included. Studies performed before 2005 were of poor methodological quality or did not report relevant endpoints for the patient.

From seven studies of good methodological quality and relevant endpoints dichotomising the outcomes and subsequently statistically pooling was possible. We found that TNP therapy* is superior to conventional dressing therapies (OR=0.45 95% CI [0.33-0.62]. Dichotomised treatment related complications less frequent in treatment with VAC-therapy (OR=0.58; 95% CI [0.35-0.96]).

Conclusion: Results of RCT's show that the effectiveness and safety of TNP-therapy* is superior to conventional dressing therapy. Also, studies indicate that there is a lower complication rate in patients who are treated with TNP therapy*.

*Vacuum Assisted Closure (VAC)