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**NEGATIVE PRESSURE WOUND THERAPY  
- treatment outcomes and the impact on the patient's  
health-related quality of life**

AKADEMISK AVHANDLING

som för avläggande av medicine doktorexamen vid Karolinska  
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## ABSTRACT

Throughout history wounds have been a cause of great distress to the sufferer and a major burden to society. Especially the slow-healing wounds have been an issue and in order to find healing treatments, complementary methods have been developed. Negative pressure wound therapy (NPWT) is one such complementary method. The overall aim of this thesis was to study if NPWT is an effective and safe method for wound treatment and to enhance the knowledge of the patients' experience of the treatment and the impact on his/her health-related quality of life (HRQoL).

Studies I and II aim at describing basic demographic data, co-morbidity, treatment results and complications in relation to wound etiology in patients treated with NPWT and at identifying risk factors for non-successful treatment and complications. A chart review was conducted based on a consecutive series of 87 patients treated with NPWT. Successful treatment was noted for 62 patients (71%). Treatment complications were observed in 18 patients (21%). The strongest risk factors associated with non-successful treatment were having a pressure ulcers or a positive culture for *Staphylococcus Aureus*, and for complications a positive culture for either *Staphylococcus Aureus* or *Pseudomonas Aeruginosa*. Patients with insufficient peripheral circulation in the lower extremities had a risk of both non-successful treatment and complications.

Study III is a descriptive qualitative study aiming at describing the experience of patients with wounds treated with Advanced Moist Wound Therapy (AMWT) or with NPWT. Data were collected from 15 day to day diaries written by patients during their treatment and analysed with content analysis. The results identified an overall theme "threat to normality" and three categories "impact on daily life", "manageability" and "powerlessness". For patients treated with AMWT, the main concern was pain, while patients treated with NPWT focused on the machine and its optimal functioning.

Study IV is a translation and validation study of the wound-specific HRQoL instrument Cardiff Wound Impact Schedule (CWIS), motivated by a requirement of extended tools for evaluating HRQoL, generated by Studies I-III. A total of 117 patients with acute and hard-to-heal wounds were included. The assessment of the psychometric properties of the instrument as to reliability, validity, responsiveness and ceiling- and floor-effect proved the Swedish version of the CWIS to be a reliable and valid tool for measuring HRQoL.

### Conclusions

NPWT may be an effective and safe treatment method where the outcome is dependent on the etiology of the wound. The risk factors identified of a non-successful result pinpoint the necessity of taking steps to ensure meticulous controls of infection and insufficient peripheral circulation. The NPWT has an impact on the patients' HRQoL. Patients undergoing wound treatment have different focus, concerns and needs related to treatment modality. Further research on effectiveness of the treatment and impact on the patient's HRQoL is required and the Swedish version of the CWIS has to be proven useful for the assessment.

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