

Simplifying the challenging: applying traditional negative pressure (tNPWT) to complex wounds

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Introduction

Achieving and maintaining a seal when applying tNPWT can often prove problematic in clinical practice, particularly in certain wound indications and presentations.

The aim of this case series is to share how certain dressing application techniques and/or adjunctive dressings, can be adopted to accomplish successful delivery of tNPWT.

Methodology

Seven retrospective, anonymized cases are presented across a range of wound indications which may all be considered complex or challenging when using tNPWT and achieving a seal. They include; isolating an abdominal fistula, application around external fixators, trauma wounds and open surgical wounds in awkward anatomical locations.

Conclusion

The techniques demonstrated in this case series are efficacious and safe approaches to attain a reliable seal. By adopting these techniques, resource cost may be reduced from additional dressing changes, which may be required if a seal is lost and requires reapplication of tNPWT. Not obtaining or losing a seal is not only frustrating for the clinician but may impact the efficacy of NPWT and subsequently have a detrimental effect on wound healing outcomes.

Results

The cases demonstrate successful application techniques adjunctive dressings to achieve and maintain a seal when applying tNPWT. These include 'bridging' and 'sandwich' applications.

The use of adjunctive dressings, such as stoma rings/paste, gel strips, adapting the application of the film drape and skin preparations are shown. An assessment of compression therapy to support continued wound healing and her lymphedema was conducted by the NHS Community Trust.

Figure 1. Dehisced surgical wound on the abdomen

Close position of stoma to wound with challenging skin creases. Gel patches¹ were used within the skin creases and stoma paste was used over the film adhesive to create a consistent seal

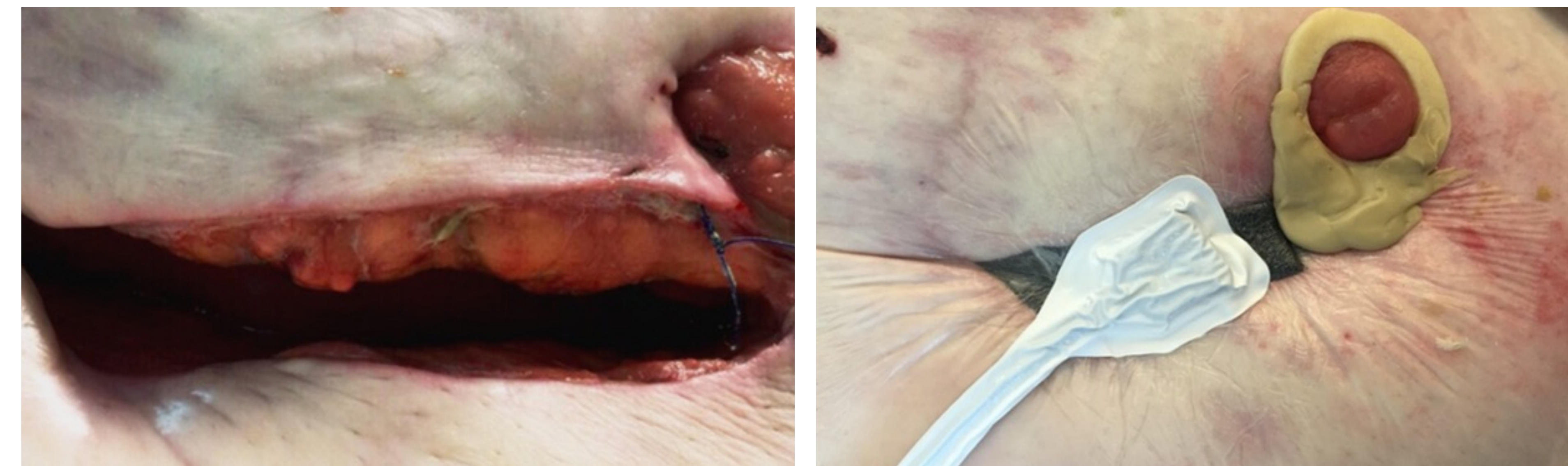


Figure 2. Open surgical wound post debridement — to heal by secondary intention

Challenging application around a foot

Hydrocolloid strips used around base of foot 'Sandwich technique' and 'Bridging Technique'



Figure 3. Management of an open abdomen with isolated fistula

A foam ring secured with film dressing is placed around the fistula

Stoma paste and a stoma ring are layered to achieve a seal and allow fistula contents to drain away from the abdomen



Figure 4. tNPWT in situ with an external fixator

Presence of external fixator to lower limb

tNPWT applied and commenced, stoma paste and sealant spray used around pin entry to eliminate leaks in the dressing

