+ Case study

Author: Laura Bushby Tissue Viability Nurse Specialist,
Northamptonshire Healthcare Foundation Trust.

The use of PICO◊7 Single Use Negative Pressure Wound Therapy device (sNPWT) to kick-start healing for a chronic abdominal surgical wound following dehiscence.

+ Plus points

The application of PICO 7 Single Use Negative Pressure Wound Therapy kick-started stalled wound healing

Resulting in fewer dressings changes and reduced nursing visits when compared to the previous treatment method

PICO 7 sNPWT helped the patient return back to his social activities.

Case Presentation

The patient is a 47 year old male with no previous significant medical history, non-smoker and generally in good health. The patient was admitted to hospital due to acute appendicitis which resulted in emergency surgery. At 10 days post-surgery following removal of clips from the surgical incision, the wound dehisced due to a surgical site infection (SSI), the patient received oral antibiotics to treat the infection.

The wound was being dressed daily with Aquacel Extra™, Biatain™ Non-adhesive foam and Hydrofilm™, this was being dressed by Practice Nurses (PN), the patient also attended weekend clinics to have the wound dressed due to the exudate levels. Due to the wound becoming problematic and non-healing the PN's referred the patient to the Tissue Viability Team (TV) for specialist assessment and also advice on treatment as they were unsure of what dressings to use.

On initial assessment by the TV team the wound was dehisced below the umbilicus on the abdomen, measurements were 3cm (L) x 1.5cm (W), with a depth of 1cm with undermining towards umbilicus of 2cm. The wound bed was clean with no signs of necrosis or slough, there were no clinical signs of infection.

Wound Challenges and Management Objectives

There were high levels of exudate from the wound which proved to be difficult to manage due to exudate leaking out of the conventional dressing, this impacted on the patient's activity of daily living and social activities, this also resulted in the patient becoming depressed due to the impact the wound was having on his life.

The practice nursing team found the wound problematic and were trying to prevent the wound from becoming infected, after using dressings for a number of weeks they found that they were unable to recommend another treatment to help the wound to heal, they referred the patient to the tissue viability team for the specialist assessment and treatment.

Image 1: Taken at initial tissue viability assessment

Treatment

Following tissue viability assessment the wound was deemed to be suitable for NPWT. PICO◊ 7 Single Use Negative Pressure Wound Therapy device (sNPWT) was recommended to be used on the wound with a Kerlix™ gauze filler due to the wound depth, and was changed twice weekly during the first week. At the start of week 2 the wound depth and undermining was reduced so no wound packing was required. At the end of week 2 use of the PICO 7 system was discontinued due to wound dimensions being minimal and no longer requiring NPWT. A conventional dressing was used for a further week, redressed twice weekly, which resulted in complete healing at the end of week 3.

Treatment Outcome and Results

At the start of NPWT the wound measured 3cm (L) x 1.5cm (W) with a depth of 1cm, the wound was undermining towards the umbilicus at 2cm, the wound surface area at this point was 3.3cm^2. After 1 week of PICO 7 sNPWT the wound measured 1.8cm (L) x 0.9cm (W), the undermining had reduced to 1.5cm, this resulting in a reduction in wound surface area to 1.4cm^2 and an overall wound healing reduction of 59%. After 2 weeks of PICO 7 sNPWT the wound measured 0.7cm (L) x 0.4cm (W) with an undermining of 0.9cm, at this point the wound had reduced in surface area to 0.3cm^2 and the overall wound healing reduction was 71% (from baseline), the wound then went on to receive standard therapy for a further week until complete wound healing was achieved.

Following assessment and recommendations from the tissue viability team it took the wound 3 weeks to achieve complete healing. Dressing use reduced from daily to twice weekly and the patient no longer needed to attend the practice daily or the weekend clinic for his dressing change, this resulting in a positive impact to his social and personal life.

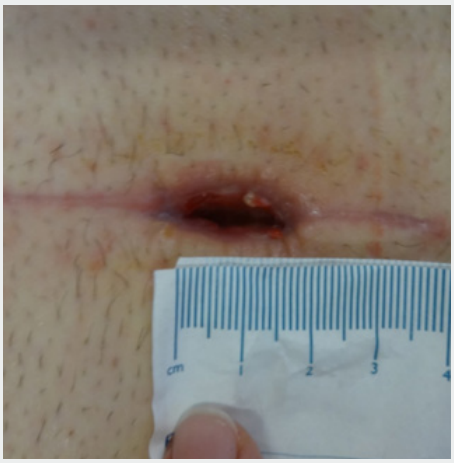

Image 2: Wound following 1 week of treatment with PICO 7 sNPWT

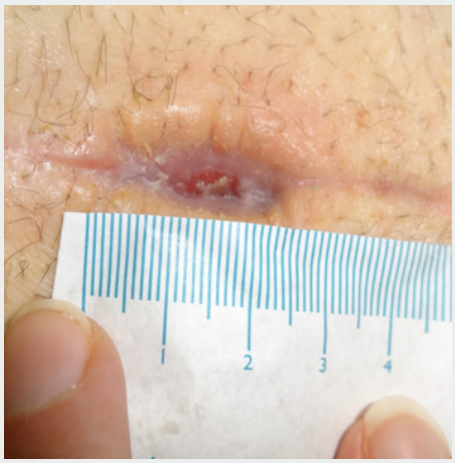

Image 3: Wound following 2 weeks of treatment with PICO 7 sNPWT, therapy was discontinued at this point and conventional dressing applied for a further week until complete healing.

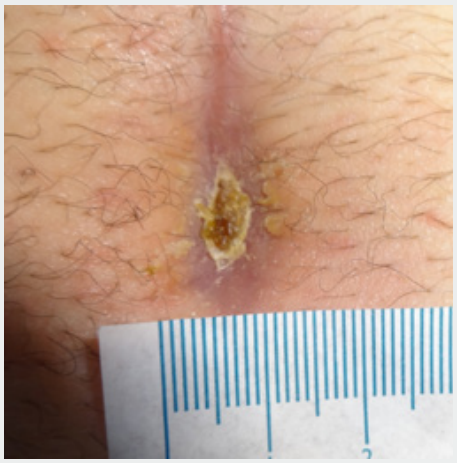

Image 4: Wound healed with dry scab intact, patient discharged from care of Practice Nurses

Individual results will vary.

Conclusions

The management of this wound was complex due to excess exudate levels, which was a contributing factor to delayed healing. By using PICO 7 sNPWT to kick-start stalled wound healing, this resulted in fewer dressing changes and reduced nursing visits. This resulted in a positive impact on the patient's well-being and enabled the patient to regain his independence and return back to his social activities.

PICO 7 Single Use Negative Pressure Wound Therapy is indicated for patients who would benefit from a suction device (NPWT) as it may promote wound healing via removal of low to moderate levels of exudate and infectious materials.

For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

Smith & Nephew, Croxley Park Building 5, Hatters Lane, Watford, Hertfordshire WD18 8YE T +44 (0) 1923 477100 F +44 (0) 1923 47710