

The use of PICO^o14 Single Use Negative Pressure Wound Therapy system on a post excision basal cell carcinoma wound

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Introduction

This case study outlines the use of PICO 14 Single Use Negative Pressure Wound Therapy system (sNPWT) to treat a post-excision basal cell carcinoma (BCC) wound on the right scapula.

Method

The patient was a 54 year old man who presented to the advanced nurse practitioner (ANP) 11 weeks post excision of a BCC to the right scapula. The patient was usually fit and well and had no significant past medical history.

Prior to seeing the ANP, the patient was being managed by the public health nurse (PHN) for 11 weeks as the wound had dehisced following surgery due to a wound infection. The wound had already been treated with antimicrobial dressings and the patient had received oral antibiotics. The wound was being treated by the PHN in clinic on a daily basis.

Following assessment by the ANP, the wound was deemed to be suitable for NPWT. It was decided that PICO 14 sNPWT would be used, this is an enhanced pump that can be used for larger wounds. This device allows for less user intervention¹, due to the pump duration of up to 14 days².

Results

On initial assessment by the ANP (Figure 1), the wound measured 9.5cm (L) x 5.5cm (W) x 1cm depth (wound surface area = 41.0cm²) and the wound bed had 100% healthy granulation tissue. PICO 14 sNPWT was applied directly to the wound with no filler (Figure 2). The dressing was changed at 7 days and then at 14 days where the pump was removed.

At the 14 day stage the wound measured 6.7cm (L) x 4.2cm (W) x 0.3cm depth (wound surface area = 23.1cm²). The wound remained granulating and there were clear signs of epithelialisation (Figure 3). There was an overall wound surface area reduction of 45% after 14 days of PICO 14 sNPWT.

It was decided by the ANP to use another PICO 14 sNPWT for a further 2 weeks to encourage wound healing. At the end of the 2 weeks the wound measured 4cm (L) x 1.8cm (W) with no depth (wound surface area = 5.7cm²) and the overall wound surface area reduction was 75% (Figure 4). PICO 14 sNPWT was discontinued and a conventional dressing was applied to the wound. After 2 weeks of conventional dressings the wound had completely healed.



Figure 1: Wound on initial assessment with ANP



Figure 2: Application of PICO 14 sNPWT



Figure 3: Wound after 14 days of PICO 14 sNPWT



Figure 3: Wound after 28 days of PICO 14 sNPWT
Results may vary

Discussion

Due to the patient being seen on a daily basis by the PHN, he was unable to be at work full time, which was having an impact financially and also mentally. The patient was also finding treatment costs expensive due to the fact that he was in employment and had to pay for dressings. This was proving costly due to daily dressing changes, and frequently changing treatments.

The PHN found the wound complex to treat. The wound infection had caused the wound to dehisce, and the location of the wound on the scapula made dressing applications difficult. A treatment was needed that would stay in place but would also be comfortable and cost-effective for the patient.

Conclusion

The management of this wound was complex and time consuming, it was also costly to the healthcare system and the patient. By using PICO 14 sNPWT to help kick-start wound healing, there was an overall wound surface area reduction of 45% after 14 days of PICO 14 sNPWT. The patient received a further 14 days of PICO 14 sNPWT which resulted in an overall wound surface area reduction of 75%.

References

1. Smith & Nephew 2019. Research & Development Report. PICO 14 and PICO 7 Initial Pump Down and Maintenance Pump Down Time Outs RD/19/084
2. Smith & Nephew December 2018. PICO 14 Service Life Testing: 14 Day Device Lifespan. Internal Report. RD/18/132