

Effective use of a portable, negative pressure wound therapy system in primary care

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Introduction and Treatment Aim

Wounds have a considerable impact on healthcare organisations and patients alike. It has been estimated that the annual cost of wound management within the NHS is £5.3 billion.¹ It is also estimated that almost 1% of the world's population experience difficult to heal wounds which are associated with negative quality of life.² With this in mind cost effective and timely healing is essential.

Two primary care patients required the use of a portable negative pressure wound therapy (NPWT) system (see Figure 1). The treatment aims were to:

- Expedite wound healing
- Reduce the frequency of dressing changes
- Reduce the risk of infection
- Improve quality of life

Patient 1: A 37-year old female presented with a dehisced caesarean section wound of 7 weeks duration. Due to high exudate levels, an alginate gel and superabsorbent adhesive dressing were being used daily and sharp debridement was undertaken prior to commencing NPWT. The wound measured 5cm in length, 3cm in width and 3cm in depth. This gave area and volume measurements of 15cm² and 45cm³ respectively. Tissue type at the wound bed was 15% slough and 85% granulation tissue.

Patient 2: A 66-year old female with a dehisced abdominal wound following a duodenectomy and cholecystectomy. The wound was of 2.5 weeks duration and measured 4.5cm in length, 1.5cm in width and 2cm in depth, equivalent to a wound area 6.75cm² and a volume of 13.5cm³. Exudate levels were moderate with 100% granulation tissue to the wound bed. A hydrofiber dressing and foam adhesive were being applied daily prior to NPWT.



Methods

The VENTURI® MiNO NPWT system (Figure 1) was chosen by the tissue viability team at Nottinghamshire Healthcare NHS Foundation Trust as it is intuitive, easy to use and its size makes it highly portable and lifestyle compatible. Both patients received continuous NPWT at -80mmHg using a gauze based wound filler, adhesive polyurethane film and portal drain. Dressing changes were twice weekly.

FIGURE 1.
VENTURI® MiNO Negative Pressure Wound Therapy system

Results / Discussion

Patient 1: After 32 days of NPWT the patient remained infection free and the wound had fully granulated to skin level, thereby reducing wound volume from 45cm³ to zero (see Figure 2). Wound area had reduced by 20%, to 12cm² and exudate levels were reported as minimal. The patient was happy with the progress of wound healing, stating that she was “very happy with the MiNO and treatment, especially having a baby to look after, it has allowed me to visit the surgery twice weekly, not daily”.

Patient 2: NPWT was used for 7 days. At the end of the treatment period, the wound volume had reduced by 36%, exudate levels remained moderate and the patient remained infection free.

FIGURE 2.

The dehisced C-section wound of patient 1 pre-, intra- and post-treatment with the VENTURI MiNO NPWT system.



Discussion / Conclusion

In both cases, use of NPWT expedited wound healing. In addition to the clinical benefits in terms of wound healing, these cases also identified that using the intuitive, highly portable VENTURI MiNO NPWT system allowed the patients to receive advanced wound care therapy within their own homes with minimal impact on daily life.

With ongoing pressure on acute care there is a growing need to deliver increasingly advanced patient therapy within the primary care setting. To achieve this often requires an approach which delivers optimal clinical outcomes with devices that are intuitive, simple to operate and easy to use.

References

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