

# sNPWT in the Management of Abdominoplasty Dehiscence

## Abstract

Plastic surgeons have long used negative pressure wound therapy (NPWT) for complex wound treatment and management<sup>1</sup>. However, transitioning patients from traditional, large control units has been challenging when wounds contract to the point that large devices become inconvenient<sup>2</sup>. NPWT is increasingly described as an emerging gold standard for treatment of wounds such as abdominal wounds<sup>3</sup>, and single-use NPWT (sNPWT) being used as an ideal therapy alternative in primary and home-care settings<sup>4</sup>.

This case study demonstrates the use of a sNPWT system on a patient with an intermediate depth wound as an alternative to topical therapies to help accelerate wound healing.

## Aims

To visibly improve wound healing by identifying wound closure by primary means using a sNPWT system, while preventing infection and further complications. An additional aim was to ensure the optimization of patient independence throughout the entirety of the sNPWT treatment allowing them to return to work.

## Patient Profile

The patient was a 44-year-old female with a comorbidity of obesity and engaged in tobacco use.

## Clinical Problem

The patient presented with an abdominal wound dehiscence following an abdominoplasty procedure accompanied by ischemia and soft tissue necrosis (Fig. 1). Due to these complications, the patient required debridement to ensure the effectiveness of NPWT therapy.



Fig. 1: Dehisced abdominal wound (Day 1)



Fig. 2: Traditional (tNPWT) System

## Treatment

The wound was first treated with the traditional canister-based NPWT system (tNPWT), the WoundPro™ from Pensar Medical™ for a period of 9 days (Fig. 2). After this initial course of tNPWT, the patient requested to transition to a more portable NPWT system, to facilitate their return to work as well as having a pump that was more convenient for in-home use (Fig. 4).

The sNPWT system, from Pensar Medical, was ordered at -125mm/Hg continuous therapy. A small foam dressing was placed in the wound bed to fill the depth and ensure contact with a self-adaptive dressing. Per standard application protocol, dressing change frequency was upon strike-through reaching dressing edges.

## Outcomes

After 10 days, significant healing progress was observed, with the discontinuation of the foam packing due to the wound bed filling with granulation tissue. There was a reduction in the wound size, facilitating primary wound closure and completion of therapy at day 86 (Fig. 3). The patient reported increased comfort, enhanced satisfaction, and ease of use with the sNPWT device. The patient was able to return to work sooner than anticipated as well as maintaining their lifestyle through the simplicity, size, and portability of the sNPWT system.



Fig. 3: Completion of Therapy (Day 86)



Fig. 4: Single-use (sNPWT) System

## Conclusion

This case study demonstrates the practicality and efficacy of the sNPWT therapy in treating complex dehiscid surgical wounds in an outpatient setting. The successful transition from a tNPWT unit to the more compact and portable sNPWT system resulted in measurable wound improvement, wound closure, and increased patient comfort.

Author note: This case study was previously published<sup>5</sup> (2019) by the The Wound Vac Company, an authorized re-seller. The case study has been updated with additional details for clarity. The sNPWT system from Pensar Medical™ is now known as the MicroDoc®(K200223). Pensar Medical™ is a trademark of Pensar Medical, LLC. MicroDoc® and WoundPro™ are trademarks of Pensar Medical™.

## References

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