

Bacteria and fungi binding mesh used as a NPWT wound filler for managing *Pseudomonas aeruginosa*

Carin Ottosson MD, PhD & Ann-Mari Fagerdahl RN, PhD



Before treatment



After 10 days

Introduction

Previous studies on treatment results using NPWT have demonstrated that the presence of *Pseudomonas aeruginosa* in the wound can jeopardise the treatment result. It has also been shown that *Pseudomonas aeruginosa* binds to the bacteria and fungi binding mesh Sorbact®.

Aim

The aim of this case study was to investigate whether the use of Sorbact® as a wound filler in NPWT would be an appropriate alternative for patients with *Pseudomonas aeruginosa* present in the wound.

Method

A 72 year old woman with a large superficial non-healing wound located on the lateral ankle was treated with NPWT using Sorbact® as a wound filler. The skin surrounding the wound was irritated and several tendons were on display. Repeated cultures proved positive for the presence of *Pseudomonas aeruginosa*.

Findings

The dressing was deemed easy to apply. At the first dressing change after two days no ingrowth of granulation tissue into the dressing could be observed. After two dressing changes (10 days) a positive effect in wound healing with signs of granulation tissue over tendons, similar to the effect of NPWT in wounds without infections using other wound fillers could be seen.

The irritation in surrounding skin was completely gone. The patient did not express any concern or discomfort with the treatment. As soon as the treatment was disrupted the status of the wound deteriorated and the infection recurred.

Conclusion

The use of a bacteria and fungi binding mesh as a wound filler is an interesting alternative for managing *Pseudomonas aeruginosa* in wounds treated with NPWT. This result widens the scope for use of wound fillers in the NPWT setting and provides a way to individualise care to the patient. Larger studies are required to explore this benefit further.