The efficacy of silver-impregnated activated charcoal dressings* in the management of malodorous critically colonised venous leg ulcers and diabetic foot ulcers

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ABSTRACT

A series of 7 case reports involving the use of a SIAC wound dressing in the management of different critically colonised wound scenarios. Patients were managed for a minimum of 2 and a maximum of 4 weeks, with the decision to continue management with a silver dressing based on continual assessment.

CLINICAL DATA

Example Case Reports

Case Report Signs and Symptoms of Infection Malodour Wound Size

Patient 1 VLU n/a -

Patient 2 DFU ↑ ↓ ↓

Patient 3 VLU ↑ ↓ ↓

Patient 4 DFU ↑ ↓ ↓

Patient 5 VLU n/a -

Patient 6 VLU n/a -

Patient 7 DFU ↑ ↓ ↓

CONCLUSIONS

Together the evidence presented demonstrates the efficacy of SIAC in the management of chronic wound populations to reduce anaerobic bacteria populations and reduce malodour and, therefore, have a positive impact on the patient’s quality of life.

REFERENCES

9. A post-hoc analysis of the clinical results showed that SIAC achieved a ≥4 log10 reduction in CD TVC within 15 minutes, and a >5 log10 reduction in TVC of CD within 24 hours of exposure.

The clinical evaluations showed reduced wound malodour over the study period. Wound size remained static or reduced and improvements in the granulation of the wound bed were also observed in each case.

The efficacy of SIAC to reduce populations of two anaerobic bacteria, which produce volatile, malodourous compounds through their metabolism. Silver-impregnated activated charcoal dressings* (SIAC) comprise of activated charcoal impregnated with silver, within a nylon sleeve. When applied to wounds, the activated charcoal absorbs bacteria and volatiles, while silver in the cloth inactivates bacteria.4,5

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The efficacy of silver-impregnated activated charcoal dressings* in the management of chronic malodourous wounds and improvements in the granulation of the wound bed were also observed in each case.

Antimicrobial activity of SIAC dressings on anaerobic bacteria evaluated by Log10 reduction assay

- Bacterial suspensions were sampled at frequent time points over the duration of testing.
- Test organisms: Bacteroides fragilis NCTC 9343 (BF) and Clostridium difficile (CD) was evaluated by triplicate using a log10 reduction assay. Samples of culture were removed at various timepoints over 24 hours and total viable counts (TVC) reduction assay. Samples of culture were removed at various timepoints over 24 hours and total viable counts (TVC) were determined.

- The test results showed that SIAC achieved a ≥4 log10 reduction in CD TVC within 1 hour, and a >5 log10 reduction in TVC of BF within 24 hours of exposure.

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