

Application of an antimicrobial cellulose wound dressing on infected lower leg ulcers: 2 case studies

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Introduction

The treatment of infected chronic wounds is a challenge in everyday clinical practice. In the treatment of these wounds polyhexanide (PHMB) is the antiseptic of choice [1]. Patients with difficult personal backgrounds further complicate the successful treatment of these wounds. Two case studies of infected chronic lower leg ulcers are presented. The treatment was carried out with an antimicrobial wound dressing made of cellulose containing PHMB*.

Method

Patient 1 (Picture 1 – 4)

An 80-year-old male patient with a mixed gaiter ulcer on the right lower leg (size: 450 cm², depth: 1 cm). The patient was taken over with a massive infection, severe exudation and odour formation. Wound and lower leg pain correspondent to 8 on the Visual Analogue Scale (VAS). The entire lower leg was oedematous and papular indurations were present in the area of the forefoot. The wound was covered with biofilm and partially with fibrin. The wound edges and the surrounding skin were reddened. Individual lesions were present. The patient's hygiene was poor.

Patient 2 (Picture 5 – 7)

A 27-year-old male patient with an infected venous leg ulcer on the right lower leg that had been present for 11 months (size: 315 cm², depth: 0.1 cm). Moderate exudation, odour and pain of VAS=7 present. A deep vein thrombosis has recently occurred. In addition, the patient suffers from drug addiction (intravenous), alcohol addiction and mental disorder.

Discussion

Patient 1

From the user's point of view, the success of the therapy lay in the rapid increase in granulation, the rapid decrease in signs of infection and the well-preserved moist wound environment. The patient noted the success of the therapy and the reduction in pain positively.

Patient 2

From the user's point of view, the success of the therapy lay in the beginning of healing, reduced exudation and moist wound management. The patient was pleased with the disappearance of the odor and pain. The cooling effect of the wound pad was also highlighted positively.

Conclusion

The antimicrobial wound dressing proved to be a suitable for the treatment of infected chronic wounds.

References

- 1) Kramer, A. et al. (2018) 'Consensus on Wound Antisepsis: Update 2018', Skin Pharmacology and Physiology, 31(1), pp. 28-58. doi:10.1159/000481545



Picture 1 Initial situation: Previous treatment has consisted of several inpatient hospital stays, split-thickness skin transplants, antibiotics and, most recently, a self-healing attempt with healing earth on the advice of an alternative practitioner. After wound irrigation and mechanical debridement**, the wound was treated with the PHMB-containing cellulose wound dressing*. Secondary dressing: wound compress#, absorbent compress##, fixation bandage### and tubular dressing† held together by adhesive plaster††. Compression therapy*** was also carried out.



Picture 2 Day 8: Declining signs of infection, less wound exudate and biofilm. Wound odor barely noticeable. Wound moister and signs of granulation at the wound edges. Reduction in swelling of the entire lower leg. Care of the wound was continued as described. Dressing change every 3 days.



Picture 3 Day 15: Neither signs of infection nor wound odor present. Clear granulation starting from the wound base and the wound edges. Lower legs only slightly swollen. Pain decreased slightly (VAS = 6). Therapy continued as described. Dressing change every 3 days.



Picture 4 Day 23: Granulation further improved and good blood flow. Another slight decrease in pain (VAS = 5-6). Last dressing change as described. According to his own statement, the patient discontinued the therapy on the advice of his alternative practitioner.



Picture 5 Initial situation: The previous treatment consisted of a combination of a tulle coated with medical honey and a hydrogel-soaked hydrophobic wound pad. The patient felt that he was not making any progress. Mechanical debridement was carried out using a debridement pad**. The wound was then treated with the cellulose* wound dressing containing PHMB. A sterile absorbent compress, a tube bandage and a compression bandage were used as secondary bandages.



Picture 7 Day 13: Exudation remains moderate. Significantly reduced odors. Granulation now throughout the wound. Flat wound edges. Wound pain decreased to VAS = 1. Treatment of the wound was continued as described.



Picture 6 Day 3: decreasing exudation but still moderate. Signs of infection no longer present. Reduced odor formation. Initial granulation, especially at the wound edges. Edema reduced. After mechanical debridement with a debridement pad**, the wound was treated again with a PHMB-containing cellulose wound dressing*. Two tubular bandages and a compression bandage were used as secondary bandages. Dressing change twice a week.

*Suprasorb® X + PHMB, **Debrisoft® Pad, ***Rosidal® SC, #Solvaline® N, ##Vliwazell®, ###Mollelast®, †tg® Schlauchverband, ††Silkafix®

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