Successful therapy of critically-colonised or locally infected wounds with a new HydroBalanced biocellulose-based wound dressing* with polihexanide on out-patients

Mosti G, Mattaliano V, Schmitz M*, Abel M*


Introduction:
Bacterial overload can block the wound healing process in the inflammatory phase. In case of a critically colonized or infected wound, the reduction of the bacterial load to a normal contamination is an important task of a wound dressing.

The aim of our work was to evaluate the antimicrobial version (PHWD)* of a new HydroBalanced biocellulose-based wound dressing (HWD®), which can absorb exudate and donate moisture as well as has antimicrobial effects by polihexanide (PHMB) on critically colonized or infected vascular leg ulcers of out-patients.

Material and Methods:
60 out-patients affected by vascular leg ulcers were treated with HWD® for wound bed preparation and wound healing. A sub-group of 11 out-patients with critically colonised or locally infected venous or mixed leg ulcers (W.I.>60) was treated with PHWD® (primary dressing) and a foam³ or a high absorbing dressing⁴ (secondary dressing). As soon as the infection was cured HWD® was used. A short stretch multi-layer compression system⁵ or a ready-to-wear compression device⁶ (in 3 cases) were used for compression treatment. The dressing change and bandage repositioning were performed according exudate amount and pain; it was weekly in all but one patient. Ulcer surface reduction or healing, bacterial burden and pain control (Visual Analogue Scale, VAS) were evaluated.

Results:
- 1 patient suddenly died (stroke)
- 3 patients were submitted to skin grafting (as a good wound bed preparation was achieved) and healed.
- 7 patients healed in 13.4 ± 2.1 weeks

After three dressing changes the bacterial burden decreased from 765000 (±345000) to 50000 (±15000) cfu (fig. 1).

A pain reduction (VAS) was observed from 7.3 (±1.9) to 2.8 (±0.8) within 3.4 ±0.8 weeks (fig. 2). The pain gradually decreased simultaneously with the reduction of infection-inflammation.

The wound dressing was well tolerated and no damages of the peri-wound skin were seen.

Conclusion:
PHWD® is effective in infection control, pain reduction, wound bed preparation in out-patients even when changed weekly. Due to these properties the dressing is effective in promoting the wound closure. It is generally well tolerated.

1: Suprasorb® X+PHMB; 2: Suprasorb® X; 3: Suprasorb® P; 4: Vliwazell®; 5: Rosidal® sys; 6: Rosidal® mobil; Lohmann & Rauscher products

Scientific grant of Lohmann & Rauscher GmbH & Co KG, Rengsdorf/Germany

Wounds-UK 2008 Wound Care Conference, Harrogate 10-12th November 2008