First Italian experience with a HydroBalanced biocellulose-based wound dressing in hospitalized patients with critically-colonized or infected chronic wounds

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Introduction:

Bacteria and their endotoxins can impair the wound healing. In case of a critically colonized or infected wound, the reduction of the bacterial load to a normal contamination is an important tasks of a wound dressing.
The aim of our work was to evaluate the effect of the antimicrobial version of a new HydroBalanced biocellulose-based wound dressing, which can absorb exudate and donate moisture as well as has antimicrobial effects by polihexanide (PHMB) on critically colonized or infected wounds of hospitalized patients.

Material and Methods:

Suprasorb® X was used for the wound bed preparation in 18 patients with 30 very painful, hard-to-heal, vascular wounds admitted to the hospital for skin grafting.
In a sub-group of 8 patients with critically colonised or infected wounds (4 pts. with arterial-, 2 pts. with mixed-, 2 pts. with vasculitic wounds; ulcer duration 6 months to 4 years). Suprasorb® X+PHMB was applied as primary dressing. As secondary dressing the film Suprasorb® F was used despite of the critical colonization/local infection because the dressings were changed frequently (every day or every other day). 5 (3-7) antimicrobial dressings were used for treatment. Light elastic compression (according to the clinical situation) to avoid/prevent oedema was always applied. Time to wound bed preparation, bioburden, pain and side effects were evaluated.

Results:

Suprasorb® X+PHMB was effective in debridement and infection control. Time to wound bed preparation was **6.2 ±1.3 days**.

The bioburden in these patients significantly decreased (fig 1):

initial: 572500 ±401986 cfu; final: 74500 ±174060 cfu

The pain (visual analogue scale, VAS) decreased after 4 dressing changes (fig 2):

initial: 7.8 ±1.5; final: 5.4 ±1.2

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

Conclusion:

Suprasorb® X+PHMB is very effective in infection control, pain reduction, wound bed preparation for promoting a re-start of the healing process and generally well tolerated.

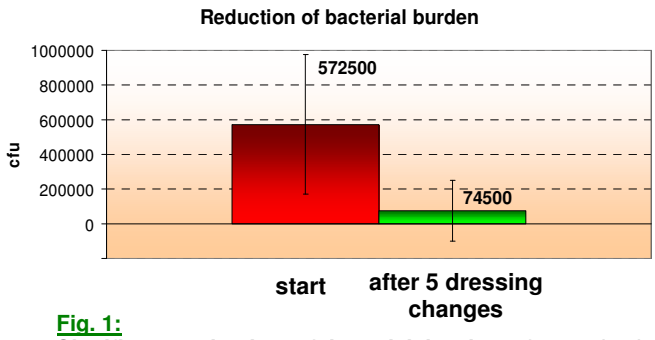

Fig. 1:
Significant reduction of bacerial burden after 5 (3-7) dressing changes (n=8)

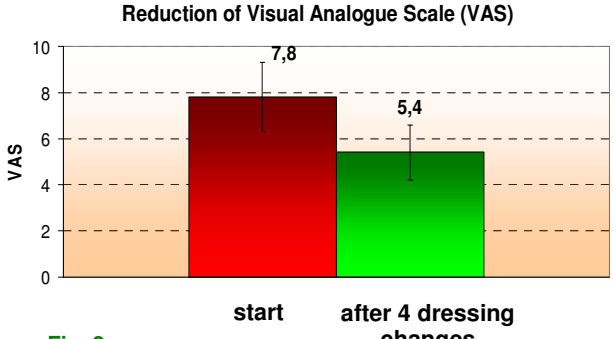

Fig. 2:
Reduction of VAS after 4 dressing changes (n=8)

Case 1

Day 1: 1050000 CFU (ps. aeruginosa; proteus mirabilis; staph. aureus)
Day 6: 2000 CFU (micrococcus)

Case 2

Day 1: 100000 CFU (ps. aeruginosa, staph. aureus)
Day 6: 0 CFU

Anatomic difficult areas: cutting with a scissor, double-layer possible

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