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REDUCING COMPLICATIONS IN DIABETIC FOOT ULCERS ON THE BASIS OF BACTERIA BINDING DRESSINGS

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Objective: Management of diabetic gangrene and post-operative situation is always challenging. The use of moist wound healing products like alginates or hydro-active foam dressings is necessary to promote the healing but, on the other hand, can cause problems with maceration and the risk of secondary wound infection. Especially on mobilized patients the use of hydro-active silver dressings might solve the bacterial problems but not the problems caused by dislocation of the dressings and maceration.

Method: We have found an effective method using a bacteria binding, highly hydrophobic wound dressing* to provide both infection control and ideal conditions for moist wound healing. This method allows the patients to be mobile without the risk of dressing dislocation and spread of secondary infection from macerated wound edges.

Results: Exemplary case studies are shown to demonstrate the principle of this method which has been used successfully in our hospital in more than 50 cases up to now.

Discussion: The combination of these antimicrobial dressings with standard wound healing products allowed us to achieve infection control and necessary moist wound conditions while providing a stable wound dressing on which mobilized patients can walk without dressing dislocation and maceration. We find this a suitable method to combine patient comfort and safety with significant improvement in healing of diabetic foot ulcers.

*Cutisorb® Sorbact® (BSN medical)

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INFECTION CONTROL WITH HYDROPHOBIC DRESSINGS? BACTERIAL CULTURES FROM WOUND SWABS REVEAL 50% OF CLEARANCE BUT 100% OF THE WOUNDS IMPROVED

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Objective: A bacteria binding, hydrophobic dressing* reduces the amount of microorganisms thus changing wound conditions towards healing. In vitro experiments showed that large amounts of bacteria and fungi can bind rapidly. We wanted to know if this effect also leads to a significant change of the microbial load of wounds in vivo.

Method: Wounds were treated with the antimicrobial dressings and wound conditions were documented. Samples from the wound ground and from the dressings were analyzed for the most common wound bacteria using standard microbiological culture technique.

Results: 22 wounds of different genesis were analyzed both at beginning of the treatment and at every dressing change. Last samples were analyzed when the wound looked clean and were followed up by standard moist wound healing without antimicrobial treatment. Wound conditions improved significantly in 21 of 22 cases. In 12 of 22 cases no more bacteria could be found both in the swabs from the wound ground and in the dressings. Bacterial clearance took place after 13 days on average (min. 5, max.23). In 9 of 22 cases both samples still carried bacteria nevertheless the wounds changed into clean conditions with clear signs of healing.

Discussion: Significant changes of the wound conditions were seen in all cases whereas wound bacteria disappeared in only one half of them. Therefore we assume that complete removal of bacteria is not necessary to change a chronic wound to a healing wound. Further in depth analysis is required to analyze whether there is a critical level of bacterial load in wounds leading either to healing or stagnation.

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