Title:
A Comparison of an Antimicrobial Wound Cleanser to Normal Saline in Reduction of Bioburden and its Effect on Wound Healing

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Abstract:
Microbial bioburden in both acute and chronic wounds is an important factor in wound healing. Consequently, the reduction of bioburden to host-manageable levels, as well as the elimination of certain virulent forms of wound pathogens (regardless of their number), has become a goal of the wound care professional. A prospective, controlled clinical study using accepted sampling methods was conducted to compare the use of an antimicrobial wound cleanser (0.057% sodium hypochlorite in an isotonic saline solution) to normal saline on the reduction of bioburden and wound size. During the 2-month study, 100% of the wounds cleansed with the antimicrobial wound cleanser (n = 9) demonstrated aerobic bioburden reduction from baseline in a range from 1 to 4 logs per wound, while 56% of the wounds cleansed with normal saline (n = 9) showed an increase in aerobic bioburden levels. The proportion of wounds exhibiting a reduction in wound size was higher in the antimicrobial wound cleanser group than in the saline group. Further research to increase understanding of the relationship between wound bioburden, healing, and cleansing agents is needed. KEYWORDS: wound cleanser, bioburden, antibacterial, infection control, wound healing
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