

## Can Dressings Soaked with Polyhexanide Reduce Bacterial Loads of Surgical Wounds?

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Effective evidence-based guidelines for preventing surgical site infections (SSIs) in dermatologic surgery are scarce. In an attempt to lower the risk of SSIs in full-thickness skin grafting, a procedure usually associated with higher SSI rates, our research group from Lund University led by Professor Artur Schmidtchen decided to study if adding polyhexanide biguanide (PHMB) to tie-over dressings could reduce bacterial loads of wounds.

A prospective, double-blinded, randomized, controlled trial was designed and conducted at Lund University hospital and ended recently. The results from this trial (1), now published in *Journal of American Academy of Dermatology* were quite surprising and unexpected. Patients that received PHMB did not only have indifferent bacterial load levels compared to the control group, but also developed a significantly higher number of SSIs! We speculated whether it was possible that PHMB reduced commensal flora giving rise to an increased colonization of pathogens instead. Other findings in this trial when all included patients were looked upon were that the presence of *S. aureus* intranasally or in wounds intra- and

postoperatively resulted in higher bacterial loads leading to a higher risk of SSI.

PHMB is a novel antiseptic agent that has been gaining popularity over the past years, and has been used in various clinical settings. It has been shown to have a broad antibacterial spectrum, yet in this clinical trial it did not reduce bacterial loads, an important factor believed to be correlated to the development of SSIs.

Further studies are therefore highly needed to establish effective measures for reducing SSIs, not only in dermatologic surgery but in all surgeries, a global problem resulting in tremendous costs for patients and healthcare.

### Reference

1. Saleh K, Sonesson A, Persson K, Riesbeck K, Schmidtchen A. Can dressings soaked with polyhexanide reduce bacterial loads in full-thickness skin grafting? A randomized controlled trial. *J Am Acad Dermatol* 2016; 75: 1221–1228.e4.

