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Surgical Infections

Eradication of Methicillin-Resistant *Staphylococcus aureus* from Pressure Sores Using Warming Therapy

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Background: Nosocomial infection is a major cause of surgical morbidity and mortality. Methicillin-resistant *Staphylococcus aureus* (MRSA) has become a prominent organism in colonization and infection in surgical patients. Pressure sores are a major reservoir of MRSA.

Materials and Methods: In this study, 33 patients with full-thickness pressure sores were randomized to receive standard care or radiant heat therapy using a Warm Up device (Augustine Medical, Eden Prairie, MN). Weekly microbial sampling was used for assessment of bacterial presence. None of the patients received antibiotics prior to or during the eight weeks of study.

Results: More than 50 species of bacteria were present in the pressure sores with a median of four organisms per sample. Methicillin-resistant *S. aureus* was found in 14 of the patients' pressure sores. In the warming group ($n = 8$), MRSA was eradicated in six patients within 2 weeks of warming, whereas in the control group none had eradication (Fisher's exact test, $p = 0.01$). Eradication was defined as three consecutive weekly swabs without bacterial growth.

Conclusion: The warming of pressure sores is being assessed as an adjunct to healing, but there is some promise that colonization by MRSA may be eradicated, thereby reducing a potential reservoir of organisms. The risk to surgical patients when patients are harboring MRSA may be minimized by warming therapy.

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Eradication of Methicillin-Resistant *Staphylococcus aureus* from Pressure Sores Using Warming Therapy

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ABSTRACT

Background: Nosocomial infection is a major cause of surgical morbidity and mortality. Methicillin-resistant *Staphylococcus aureus* (MRSA) has become a prominent organism in colonization and infection in surgical patients. Pressure sores are a major reservoir of MRSA.

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NOSOCOMIAL INFECTION is an increasingly common and costly cause of postoperative morbidity and mortality. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a prominent causative organism of nosocomial infection, and there is evidence of emerging resistance to other antibiotics such as vancomycin [1]. Colonization of open, chronic wounds creates a reservoir of these organisms, particularly in pressure sores, that may impact other nosocomial infections. Up to 17% of nursing home residents [2] and 15% of long-stay elderly patients

are now colonized with MRSA [3]. This is of concern when such patients are admitted to surgical or orthopedic wards with new, unrelated conditions.

MATERIALS AND METHODS

In this study, over 270 patients with a pressure sore (grade 3–4 on the Sterling Classification) [4] were screened from nursing homes and hospital practice for recruitment into a ran-

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J. Dissemond

Der Hautarzt. 2007, Vol. 58, No. 11: 952

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David Leaper

Surgical Infections. Jul 2006, Vol. 7, No. supplement 2: s-101-s-103

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