Antiseptic cloths associated with reduced rate of treatment-resistant bacteria in the trauma center

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Bathing trauma patients daily using cloths containing the antiseptic chlorhexidine may be associated with a decreased rate of colonization and infection by methicillin-resistant Staphylococcus aureus (MRSA) and other difficult-to-treat bacteria, according to a report in the March issue of *Archives of Surgery*.

"Healthcare-associated infections pose a significant burden to patients admitted following major injury," the authors write as background information in the article. Chlorhexidine gluconate, a water-soluble antiseptic preparation, has broad activity against bacteria, yeasts and viruses and has previously been shown to reduce the acquisition of MRSA and other resistant organisms.

Heather L. Evans, M.D., M.S., of UW Medicine's Harborview Medical Center, Seattle, and colleagues conducted a study in which 253 patients admitted to a level one trauma center between November 2006 and April 2007 were bathed at least once daily using a single-use cloth bath product not known to have antibacterial or antiseptic properties. For the next six months, from May through October 2007, 286 patients in the same trauma center received daily baths in cloths impregnanted with a 2-percent chlorhexidine solution.

Patients receiving chlorhexidine baths were significantly less likely to acquire a catheter-related bloodstream infection (2.1 vs. 8.4 infections

for every 1,000 days with a vascular catheter in place) or ventilator-associated pneumonia caused by MRSA (1.6 vs. 5.7 infections for every 1,000 days requiring ventilator support) than those who received baths with the non-medicated cloth. In addition, the rates of colonization with MRSA and Acinetobacter, another bacteria immune to most antibiotics, were lower among those in the chlorhexidine group.

"Antibiotic-resistant bacteria pose a unique challenge, and substantial resources are devoted to infection control to reduce their transmission. Patients with severe disease, recent surgery and indwelling devices are at higher risk of colonization and infection; trauma patients, in particular, are at risk of MRSA and vancomycin-resistant enterococci," the authors write. "Poor compliance with hand hygiene, reluctance to adopt barrier precautions owing to unintended consequences of isolation and controversy over the cost-effectiveness and feasibility of legislated universal surveillance have been barriers to effective infection control."

The cloths should not be considered a replacement for hand hygiene or other precautions, but they may supplement these efforts, the authors note. "Our findings support the use of routine chlorhexidine bathing as an adjunctive infection-control measure to reduce transmission of MRSA, A. baumannii and potentially other epidemiologically important organisms that colonize the skin of critically ill hospitalized patients."

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