



# Clinical Digest

ONLINE EDITION

## WOUND MANAGEMENT

### Activated Macrophage Suspension for Hard-to-Heal Pressure Ulcers

Injecting living activated macrophage suspension (AMS) into hard-to-heal pressure ulcers produces significantly better results than conventional treatments, according to researchers from Sheba Medical Center in Ramat-Gan, Israel.

In the prospective trial of elderly patients with stage III or IV pressure ulcers, 38 patients were assigned to receive standard care, including surgical debridement and a variety of treatments, such as polyurethane dressings, hydrocolloids, hydrogels, and antibiotics. The other 66 patients' wounds were treated with AMS, derived from whole blood donated by a healthy young volunteer. After debridement, AMS was injected into the wound. If injection wasn't possible (for example if the ulcer was deep) or in cases of fistulas or cavities, AMS was poured into the wound.

Wounds were covered by AMS-soaked gauze for 24 hours, and then dressed with gauze pads absorbed with lactated Ringer's (Hartman) solution or alginate-containing dressings, polyurethane dressings, or carboxymethylcellulose dressings. If needed, AMS injection was repeated. For most patients, the mean time for reinjection was 4 weeks.

In the standard-care group, 10 of 75 ulcers (13%) healed completely in

a median of 118 days; 31 ulcers (41%) were at least 50% healed in a median of 74 days. By comparison, in the AMS group, 98 of 141 ulcers (70%) were completely healed in a median of 87 days, and 120 ulcers (85%) were at least 50% healed in a median of 49 days.

Overall, 39 AMS patients (59%) achieved complete closure for all wounds, compared with 2 (5%) control patients. Introduction of AMS to wound care regimens offers a new option for hard-to-heal pressure ulcers and further study may provide evidence for use of AMS in place of other conventional treatments in clinical practice.

Source: *Arch Gerontol Geriatr*. 2010;51(3):268-272.  
doi:10.1016/j.archger.2009.11.015

## INFECTION CONTROL

### Extra Swabs Make a Difference

Identifying the patients who are already carrying methicillin-resistant *Staphylococcus aureus* (MRSA) can help hospitals start infection control more quickly, but that may mean multiple cultures. In fact, researchers from Dalhousie University and Queen Elizabeth II Health Sciences Centre in Halifax, Nova Scotia, found it took 14,392 samples to identify 49 colonized patients who would have been missed.

The researchers took 60,049 pairs of surveillance swabs from 21,599

patients. Of those patients, 7,727 had 1 swab, 6,212 had 2 swabs, and 2,736 had 3 swabs. The rest of the patients had 4 or more, usually because they were patients more than once. One patient had 41 pairs of swabs submitted.

During the 21 months of the study, 492 patients were newly identified as colonized with MRSA; 742 cultures were positive for MRSA from patients who were known to be colonized from previous surveillance cultures or clinical specimens. The sensitivity of the first of multiple cultures of a set was 74.3%. Of the patients who had only a single culture performed, MRSA was detected for the first time in 80. In 106 cases, MRSA was detected on the first of multiple pairs of swabs. But in 49 instances, MRSA was not detected until the second or third specimen.

The researchers cite another study that found transmission of MRSA declined significantly when a surveillance program was in place. They note, as well, that recent guidelines advocate screening, although its effectiveness is still being debated. The extra caution comes at a price: In this study, the total cost of the 14,392 multiple swabs was \$102,327, or \$2,088 per MRSA-colonized patient identified. ●

Source: *Am J Infect Control*. 2010;38(8):596-599.  
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