

Wound Cleansing for the 21st Century

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Clinicians are taught to cleanse a wound before applying a dressing of any kind. The goal of wound cleaning is to remove debris and contaminants from the wound without damaging healthy tissue. Our mothers used hydrogen peroxide at full strength — we envisioned the germs being burned from our wounds. As CWOCNs, we have been taught hydrogen peroxide should be used only to remove stains from clothing. However, some physicians still use my mother's method and order wound irrigation with peroxide, Dakin's solution, povidone iodine, or acetic acid. According to the AHCPR,¹ hydrogen peroxide, along with many antiseptic agents, are *skin* cleansers which are toxic to wound tissue and should not be used in the wound. Consequently, many nurses spray cleanser or saline on a gauze pad, then wipe the wound. Is this adequate or too much?

Saline or water irrigation is the most appropriate and safest way to cleanse a wound. Irrigant delivery pressure should be between 4 and 15 psi — less than 4 psi is not adequate to remove the loose debris and higher than 15 psi could drive the debris into the wound bed rather than off the surface.² With apologies to my mom, a single-dose wound irrigation device that delivers between 6 and 8 psi is often my choice. - OWM

References

1. U.S. Department of Health and Human Services. Agency for Health Care Policy and Research. Quick Reference Guide for Clinicians. *Treatment of Pressure Ulcers. Clinical Practice Guidelines No. 15*. December 1994.
2. Rolstad BS, Ovington LG: Principles of wound management. In Bryant RA, Nix DP. *Acute and Chronic Wounds: Nursing Management, 3rd ed*. St. Louis, MO: Mosby;2007.

Commentary from Ferris Mfg. Corp.

PolyMem Silver[®] dressings cleanse, fill, absorb, moisten a wound continuously, and help reduce inflammation and edema.¹ The dressings help reduce pain while on the wound. The dressings also reduce pain associated with dressing changes by often eliminating the need to cleanse the wound during changes. When initially placing the dressing, clinicians may want to use Harrison's suggestions for cleansing; with subsequent dressing changes, cleansing may be unnecessary because wound debris is absorbed into the dressing and discarded along with it.

A representative case study² shows the benefit of using PolyMem Wic Silver QuadraFoam[®] cavity filler dressings on a painful heel pressure ulcer. Use of the dressings eliminated the need to cleanse the wound during dressing changes. The dressings' absorbing action drew debris and contaminants from the wound into the dressing. The patient's pain decreased from 9 (on a 1-to-10 scale) to 5 within 2 weeks. Wound pain and odor were eliminated within 4 weeks, at which time a nonsilver dressing was applied. The wound closed in 14 weeks.



April 11: the wound measured 8 cm x 7 cm (depth unknown). Pain is 9 (on a 1-to-10 scale); odor is overpowering. Use of PolyMem Wic Silver initiated.



May 14: the wound measured 5 cm x 2.5 cm x 2 cm deep. Pain and odor absent. Dressing changed to PolyMem Wic.

References

1. Beitz AJ, Newman A, Kahn AR, Ruggles T, Eikmeier L. A polymeric membrane dressing with antinociceptive properties: analysis with a rodent model of stab wound secondary hyperalgesia. *J Pain*. 2004;5(1):38-47.
2. Aganthangelou C. Large necrotic malodorous pressure ulcer closed using polymeric membrane silver cavity filler. Poster presented at the World Union of Wound Healing Societies. Toronto, Canada. June 2008.

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