

## Articles of Interest

# Literature Review

### Reviewers

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### Incorporating Laboratory Values in Chronic Wound Management

**Authors:** Thomas Hess C,  
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**Publication:** *Advances in Skin & Wound Care*. 2004;17:378-86.

**Reviewer:** Leah Shapera, RN,  
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This article provides a good overview of some of the central considerations for preventing the misdiagnosis of wounds. As the authors point out, misdiagnosis of wounds is not an uncommon occurrence, especially in some of the more unusual wounds, such as pyoderma gangrenosum, calciphylaxis, cryoglobulinemia, bullous pemphigoid, and necrotizing fasciitis. Unfortunately, misdiagnosis impacts the patient by prolonging suffering due to delayed healing. It also leads to the inappropriate use of medications and topical treatments, which in turn can cover up symptoms, prolonging the wrong diagnosis.

In this article, emphasis is given to the importance of using appropriate tools, such as the medical

record, risk-assessment tools, manual screening tools, physical findings of the wound and skin, as well as other diagnostic tests to assist in wound diagnosis. The article focuses specifically on pressure, venous and arterial ulcers, and includes a review of the pathophysiology of each. For each type of wound, the authors provide a list and explanation of the laboratory values and other diagnostic tests that are of particular relevance for diagnosis.

### Quality Control in Chronic Wound Management: The Role of Local Povidone-iodine (Betadine) Therapy

**Author:** Daroczy, J

**Publication:** *Dermatology*. 2006;212(suppl 1):82-87

**Reviewer:** David Haligowski,  
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Povidone-iodine use on chronic wounds has fallen out of favour over the last number of years over concerns of tissue toxicity and delayed wound healing. During the same time, systemic antibiotics were being overused. The author wanted to show whether povidone-iodine affected venous leg-ulcer healing and how it compared to systemic antibiotics when they were used in superficially infected/critically colonized wounds.

These antimicrobials were used with and without the gold standard, compression therapy, which itself is under-utilized. Venous leg ulcers are the most commonly encountered chronic wounds seen in medical practices. Thus, the results of this study can have widespread implications with all wound-care providers.

Sixty-three patients with ulcers due to deep venous refluxes were randomized to no compression or to compression with topical povidone-iodine or systemic amoxicillin. Forty-two of these 63 patients received compression therapy, one-half receiving topical treatment and one-half oral amoxicillin. The end-point for this 12-week study was the time to ulcer healing. Because of increasing antibiotic resistance, proving enhanced or equivalent wound healing with povidone-iodine might help reduce the excessive use of systemic antibiotics.

All ulcers were superficial and less than 5 cm in diameter. They were cultured after debridement and cleansing.

Compression increased the ulcer-healing rate compared with the no-compression group using the identical topical antimicrobial. Eighty-two per cent of 21 patients treated with topical povidone-iodine and compression healed, not significantly different from the 21 patients treated with amoxicillin

and compression (85 per cent healing). Twenty-one patients were treated with povidone-iodine without compression, and 62 per cent of these culture-positive wounds healed. Patients were re-examined five months later to assess for superficial bacterial colonization. Of those treated with systemic amoxicillin, 32 per cent showed evidence of bacterial presence on culturing, but only 11 per cent who were treated with the topical solution were positive.

The author concluded that systemic antibiotics therapy is required only in case of systemic symptoms. This would appear to be true at least for oral amoxicillin. The aim of antibiotic therapy is to eradicate the invasive pathogens, not to make the exudates free of all bacteria. The most frequent pathogen seen in this study was *S. aureus*, 71 per cent being methicillin-resistant. The second most frequent pathogen was *P. aeruginosa* of which 48 per cent were quinolone-resistant.

Unfortunately, the topical dressing used with compression therapy and systemic antibiotic was not identified in this study. A comparison of povidone-iodine to best-practice moist wound healing would help clinicians decide if povidone-iodine offers any treatment advantage in wounds superficially infected with bacteria. ☺

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- G. Lalonde  
Head Nurse, New Products  
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