Articles of Interest
Literature Review

Reviewers
Leah Shapera, RN, MSN
DG Stevens, MD, BSc, FRCSC

Effectiveness of a Topical Formulation Containing Metronidazole for Wound Odour and Exudate Control

Authors: Kalinski C, Schnepf M, Laboy D, Hernandez L, Nusbaum J, McGrinder B, Comfort C, Alvarez OM

Publication: *Wounds: A Compendium of Clinical Research and Practice.* 2005;17(4):84-90.

Reviewer: Leah Shapera, RN, MSN

The authors of this study rightfully point out that in advanced disease such as cancer, the goals of care are often not focused on wound closure or healing but rather on issues such as odour and exudate control. These issues often have profound and devastating effects on patients and their lives. This prospective study explored the use of a compounded topical formulation consisting of metronidazole (0.75%) in a gel form to help control odour and exudate in 16 cancer patients with clinically challenging, malodorous, fungating wounds.

All wounds were clinically assessed for general appearance, signs of infection, degree of exudate, maceration, wound size and local pain. A Visual Analogue Scale was used to assess odour, both by the patients and the investigator, prior to initial application and once daily for the two-week study period. All patients received the same wound cleansing and study protocol using the metronidazole (0.75%) in a gel form. Patients on systemic antibiotics, chemotherapy or radiotherapy were excluded from the study.

The results showed that complete elimination of odour was reported 24 hours after the initial application in 10 (62.5%) of the 16 patients. There was significant odour control in the remaining six (37.5%) patients. Of the six patients that noticed significant improvement without complete odour elimination, it should be noted that five of the six had wounds in the perineal and rectal areas, which present some of the most highly challenging areas for odour control.

Topical metronidazole (0.75%) in gel in this study was also seen to have a positive effect on reducing wound exudate; this was clinically evident after just two applications and persisted throughout the two-week study period, although the differences were not found to be statistically significant.

Although other research has been done on this topic and the authors do include an excellent reference list, I commend these researchers for continuing to explore this important clinical intervention and for including the aspect of exudate control in their research.

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Negative Pressure Wound Therapy after Partial Diabetic Foot Amputation: A Multicentre, Randomized Controlled Trial

Authors: Armstrong D, Lavery L

Publication: *The Lancet.* 2005; 366:1704-10

Reviewer: DG Stevens, MD, BSc, FRCSC

This article by recognized leaders in the field of diabetic foot care offers us something still quite rare, namely a well-designed and executed randomized controlled trial. Specifically, the question is posed as to whether negative pressure wound therapy (NPWT) improves the proportion and rate of wound healing after partial foot amputation in the diabetic population compared with standard moist wound care according to consensus guidelines.

A total of 162 patients who had undergone amputation up to the transmetatarsal level were randomized to either NPWT (n=77) or moist wound care (n=85). Duration of treatment was 16 weeks, and all patients received an offloading device for ambulation.

Statistical analysis of the results revealed similar population characteristics between the two treatment groups and a similar dropout rate. Endpoint analysis revealed no difference in adverse events but showed a number of clinically significant benefits of NPWT over standard moist wound care. Specifically, the NPWT group demonstrated a more rapid and exuberant production of granulation tissue, faster time to wound closure and a higher proportion of healed wounds (56 per cent vs. 39 per cent). Also, while not reaching statistical significance, a trend toward a much-reduced risk of secondary amputation was seen (3 per cent vs. 11 per cent).

This landmark study gives us a significant scientific basis to support what clinicians employing NPWT have been reporting anecdotally for some time: enhanced granulation and faster wound healing with fewer patients requiring secondary amputation. The fact that this study analyzed large and potentially complex amputation wounds must surely further bolster claims of the observed benefits of NPWT for lesser wounds.