Addressing Exudate in Patients with Refractory Leg Ulcers: Novel Active Fluid Management® Silver Dressing*

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Background
Wound exudate is a generic term given to fluid produced from acute and chronic wounds once hemostasis has been achieved. Bacterial byproduct, proteolytic enzymes, and dead white cells increase the viscosity of exudates and create a characteristic odor. Proteolytic enzymes can delay healing by reducing fibrinolytic activity and are also associated with maceration of intact skin - exacerbating skin damage through irritation. Chronic venous insufficiency (CVI) changes the skin's microcirculation causing hypoxia, edema and ulceration secondary to excess exudate. Standard care includes compression bandages and management of the wound bioburden and exudate. A novel Active Fluid Management® silver dressing* designed to actively move fluid away from the wound instead of passively absorbing fluid will be evaluated as an approach to addressing wound exudate and maintaining a moist wound healing environment without periwound maceration.

Methods
Three patients with refractory leg ulcers were evaluated. An Active Fluid Management® Silver Dressing was used to manage wound exudate. All of the patients had undergone conservative wound management for at least two months prior to enrollment including: sharp debridement, compression therapy, and foam or silver alginate dressings. The ulcers were free of bioburden and significant peripheral arterial disease. Primary dressings were substituted with the Active Fluid Management® silver dressings* and were changed every three to seven days. Wound measurements and clinical responses were evaluated.

Results
Active Fluid Management® silver dressings* were shown to be the most efficient dressings because they adequately managed the exudate and kept the bioburden at a minimum. Reduced bioburden was evidenced by decreased pain, odor, and drainage. Active Fluid Management® silver dressings* significantly improved the healing of wounds.

Conclusions
Management of wound exudates and bioburden is a key element in the care of chronic wounds and can be accomplished in a cost-efficient manner that is manageable for the patient and care provider. Active Fluid Management® silver dressings* are useful in creating the optimal environment for actively managing wound exudate in refractory leg ulcers as a first line therapy or in refractory cases.

Case Study 1
Sixty-one year old female presented with chronic venous insufficiency, hypertension, and two full thickness granulated ulcers to the medial aspect of her right leg. Ulcers had been present for five years. Calcium alginate dressings had been tried with minimal success. Ulcer resolved after the continued use of Active Fluid Management® silver dressing*.

Case Study 2
Sixty-seven year old male with hypertension was being treated for a full thickness ulcer to his right leg. Different dressings were tried for over one year with minimal success in managing the exudate and promoting wound healing. 12/3/2008 Active Fluid Management® silver dressing was initiated. Drainage was well-managed. Improvement in wound healing and exudate management was noted at each clinic visit through last visit on 2/18/2009 when patient discontinued clinic visits.

Case Study 3
Sixty-two year old female presented in clinic in 2/2007 with a full thickness ulcer existing since 2005. Wound had odor and was colonized with gram-negative and gram-positive organisms. Dressing changes were being done 3 times per week to decrease bioburden, manage excess drainage, and prevent maceration of periwound skin. 11/21/2008 use of Active Fluid Management® silver dressing was instituted. Frequency of dressing change and maceration were reduced.
CASE STUDY

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