The Management of Diabetic Foot Ulcers Using an Active Fluid Management Foam Dressing*

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Objective
To demonstrate successful use of an effective and versatile dressing to manage diabetic foot ulcers in a practical clinical setting.

Introduction
Current standard of practice suggests that a moist wound environment combined with intact peri-wound skin best promotes wound healing. Patients with advanced comorbidities including Diabetes Mellitus already experience delayed wound healing potential so any compromise to the peri-wound tissue may further compromise wound healing.

It is widely accepted that most chronic wounds are stalled in the Inflammatory Phase of wound healing. The environment of a chronic wound fails to stimulate cell proliferation, has abnormal levels of matrix metalloproteases (MMP’s), and altered fibroblast mitosis, all of which can lead to delayed wound healing (1,2). The clinical manifestation of chronic inflammation may lead to excess peri-wound maceration. In one study by Jorgensen et al., 55% of ulcers studied became macerated due to excessive drainage causing damage to the peri-wound skin (3). The ideal dressing is one that maintains a moist environment at the wound’s surface and facilitates the removal of excess drainage without allowing peri-wound maceration.

Case 1
The patient is a 65 year old male, with diabetes mellitus and a right distal symes amputation who developed a left foot ulcer which extended down to the level of the flexor tendon. The wound was treated with weekly applications of a porcine extracellular matrix and an Active Fluid Management foam dressing* which was changed daily per patient request. The wound showed significant improvement and a decrease in peri-wound maceration over 11 weeks.

Case 2
The patient is a 77 year old male, with a history of diabetes mellitus and a Transmetatarsal amputation (TMA) to the left foot, with a chronic distal stump ulceration. After revision of the TMA, the wound was treated with weekly applications of a living skin equivalent covered with an Active Fluid Management foam dressing.

AFM Technology
Unlike traditional foams, ULTRA dressings use Active Fluid Management technology to first spread exudate across the entire foam dressing, maintaining an evenly moist interface between the dressing and the wound bed and utilizing the entire foam substrate. ULTRA Dressings keep the peri-wound skin dry, the wound bed moist and the harmful exudate away from healing wounds.

Conclusion
The ideal dressing for most wounds is one that maintains a moist environment at the wound’s surface, while facilitating the removal of excessive drainage to prevent peri-wound maceration and skin breakdown. The Active Fluid Management dressings, were shown to be effective in managing excessive wound exudate and hastening healing in chronic diabetic wounds.

References
S.Thomas, Laboratory findings on the exudate-handling capabilities of cavity foam and foam-film: J Wnd Care. (May 2010) Vol 19(5) pp.192-200

*ULTRA dressing
Milliken Healthcare Products, LLC