



Case Study Review: Use of an absorbent bacteriostatic dressing for multiple indications

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Objective:

To identify the possible clinical benefits of an antimicrobial PVA foam dressing used to treat chronic wounds.

The Challenge

The challenges associated with chronic wounds include but are not limited to the presence of necrotic tissue, bioburden and inappropriate levels of moisture. Additionally, the patient's overall age, health and comorbid conditions are factors to be taken into consideration when determining the optimal dressing. The use of a bacteriostatic dressing can provide an

option when wound infection has been eradicated yet there remains concern for recurrence of the infection and impaired wound healing.

Our Solution

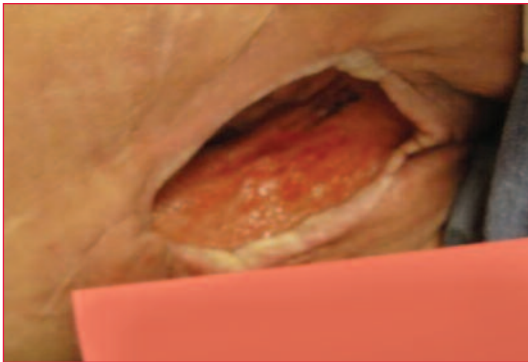
A polyvinyl alcohol (PVA) foam impregnated with Methylene Blue and Gentian Violet* was used for topical therapy. The goal is to provide a highly absorptive, broad spectrum bacteriostatic dressing which is compatible with enzymatic debriding agents and growth factors.

* Hydrofera Blue foam dressing (distributed by Hollister Wound Care)

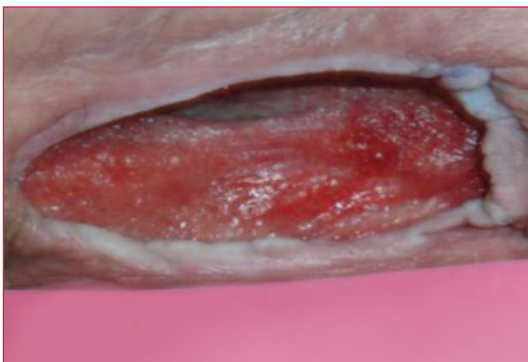
Case #1

Patient presented with right Gluteal Pressure Ulcer. Comorbidities included paraplegia, flap surgery, and osteomyelitis. Medications included Morphine, Amitriptyline, Baclofen, Norco. Offloading was provided with wheelchair cushion and air mattress for the bed. Wound cultures positive for MRSA, Alb 2.7. Previous treatment NPWT and alginate.

Day 0 – began use of the antimicrobial PVA foam dressing: 6.9 x 4.0 x 2.0 tunneling at 2 o'clock is 2.5 cm, wound bed is 90% granular with 10% necrosis, moderate amount of serosanguenous drainage, periwound macerated.



6 weeks since start of treatment: Wound bed looked “remarkably improved” per physician note. Wound size had not changed significantly (6.9 x 3.5 x 2.0). Wound bed contained bright red granulation tissue without signs of infection and with continued healing.



Case #2

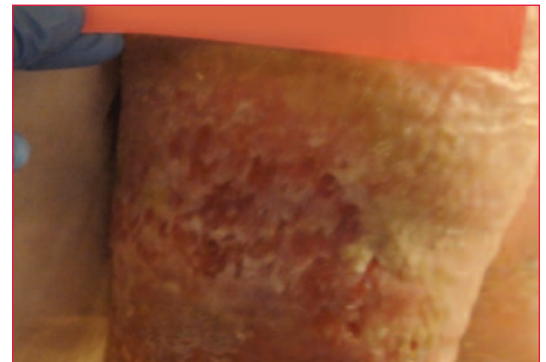
Patient presented with bilateral lower extremity ulcers of 3 years duration. Comorbidities included Diabetes, hypertension, congestive heart failure, coronary heart disease, renal insufficiency, rheumatoid arthritis, and gout.

Recent pertinent labs and diagnostics: (+) pseudomonas aeruginosa, Biopsy shows epidermal acanthosis, papillary hyperplasia, hyperkeratosis, focal hypergranulosis compatible with venous stasis

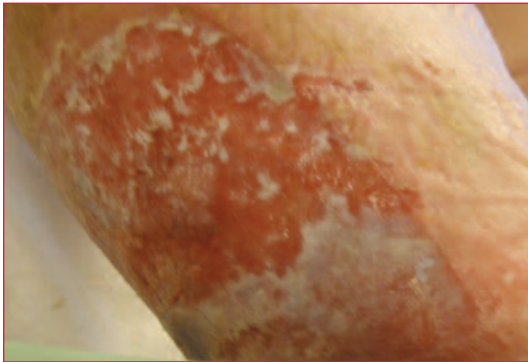
Consults included Infectious Diseases, Vascular (Arterial and Venous)

Previous treatment: Seen in another wound center for 1 month. Treatments included compression therapy, foam dressing, silver dressing, and collagen. Twice weekly visits in WHC for compression.

Wound A: Right Lateral Leg: Venous stasis ulcer of three years duration. Started antimicrobial PVA foam dressing treatment to right leg ulcer (30.0 x 14.0 x 0.1). Patient described consistent aching and discomfort in lower extremities. (intensity 5/10 pain scale)



Wound A: Right Lateral Leg: One month after starting treatment noted large amount of serosanguinous drainage, pink wound bed with some areas of maceration and epithelialization (9.0 x 11.0 x 0.1), discomfort/achiness was on and off with 2/10 pain scale



Wound B: Left Lateral Leg: Two months after starting treatment: Patient was admitted in hospital for other medical reasons and came back to WHC with markedly edematous legs, noted moderate to large amount of serosanguinous drainage, pink wound bed with areas of maceration (11.5 x 21 x 0.1), discomfort/achiness on and off with 2/10 pain scale



Wound B: Left Lateral Leg: Venous ulcer of 3 years duration. Long term concerns of maceration, odor and weeping of tissues. Started treatment with antimicrobial PVA foam dressing. (31.0 x 21.0 x 0.1). Patient described consistent achiness/discomfort of lower extremities (5/10 pain scale).



Case #3

Patient with Pyoderma Gangranosa presented to the wound clinic with an ulcer on left shin of 2 weeks duration, measuring 6.1 x 3.8 x 0.2, pain 7/10

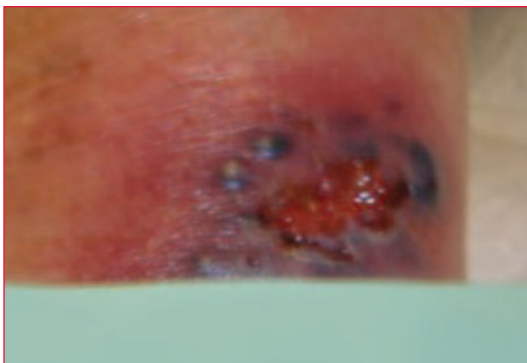
Co-morbidities included Diabetes, Ulcerative colitis, history of DVT Left Lower Extremity with pulmonary embolism, and Leiden factor V deficiency.

Labs and diagnostics included Albumin - 3.3g/dl, no growth in wound cultures. Consult with Hematologist for Leiden Factor V deficiency

Previous treatment: Steroid therapy, foam dressing, compression therapy

19 weeks of treatment with the antimicrobial PVA foam dressing. "The ulcer bed itself looks healthier with granulation tissue and less necrotic tissue" per physician notes. Moderate amount of serosanguinous drainage, measured 2.2 x 2.8 x 0.4, no complaint of pain on this visit

Right ankle: Patient developed additional ulcer on ankle 3 months after initial visit. Treated with the bacteriostatic foam. Noted moderate amount of serosanguinous drainage, red/yellow wound bed with areas of necrotic tissue and inflammation on periwound area (3.2 x 3.3 x 0.2), pain 6/10 was relieved by OTC pain medication.



Healed in 9 weeks



Summary:

The use of this antimicrobial PVA foam dressing in this case series demonstrated clinical efficacy in non healing chronic wounds. Wound healing progressed well with the use of this dressing. Patients reported decreased pain and experienced no complications from the wound or plan of care. The staff noted resolution of epibole and there was no maceration of wound margins noted. The staff and caregivers noted ease of use with infrequent dressing changes, and family caregivers commented on the additional benefit of the “blue to white” color change feature of the dressing that helped them determine when to change the dressing.

As presented at

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Washington DC

References

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3. Hess, C. T. (2007). *Clinical Guide Skin and Wound Care*. (6th ed). Ambler, PA: Wolters Kluwer/Lippincott.

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