

Use of collagen alginate dressing in conjunction with Gentian Violet/Methylene Blue Pre-moistened Wide-cell Polyvinyl Alcohol Antibacterial Foam in the Treatment of Wounds with Necrotizing Fasciitis – Case Series

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Background

As sited in several wound care journals, Necrotizing Fasciitis (NF) is a complex disease that poses a severe threat to tissue viability. Prompt and multifaceted approach to wound management is crucial and can also be vital for the patient's clinical outcome.

Case Series

This case series evaluated the efficacy of early treatment using a collagen alginate (CA) dressing in combination with a gentian violet/methylene blue (GV/MB) pre-moistened wide-cell polyvinyl alcohol (PVA) antibacterial foam on wounds that had the NF diagnosis and exposed tendon.

Results

In the treatment of NF, this case series demonstrated that using the combination of the CA dressing and GV/MB pre-moistened wide-cell PVA was effective in aiding the formation of granulation tissue over exposed tendon. In case #1, within a 72 hour of utilization of the dressing combination, 80% of the exposed tendon was covered with healthy granulation tissue.

Conclusion

In this case series, utilization of the combination of the CA dressing and GV/MB pre-moistened wide-cell PVA in the treatment of NF aided in the in promoting healthy granulation tissue with positive patient outcomes. Furthermore, due to limited case series, additional research will be required.

Case 1: Necrotizing fasciitis of the left leg secondary to snakebite

65-year-old male: Non-Hodgkin's Lymphoma, history of open fracture to left ankle, severe sepsis, leukocytosis, thrombocytopenia



Baseline

Wound size: 8.5 x 9.0 x 0.5cm
80% of Fibrous tissue, +3 Edema,
100% Epibled Edges to the circumference,
tendon exposed, moderate drainage



Wound size: 8.5 x 9.0 x 0.5cm

Cleanse, pat dry, applied CA dressing and covered with GV/MB pre-moistened wide-cell PVA, wrapped with light compression to entire leg & foot, to be changed every three days



72 Hours

Wound size: 8.5 x 9.0 x 0.5cm
72 hours after application of CA dressing and GV/MB pre-moistened wide-cell PVA, you can see 90% coverage of tendon, increased perfusion to wound bed, and decrease of Epibled edges



Closed: Week 25

Case 2: Necrotizing fasciitis of the left leg secondary to snakebite

65-year-old male: Non-Hodgkin's Lymphoma, history of open fracture to left ankle, severe sepsis, leukocytosis, thrombocytopenia

Wound 1



Wound 2



Baseline

Wound sizes:
W#1: 15 X 3.0 X 0.5 cm; W#2: 4 X 0.5 X 0.5 cm
Was scheduled for NWPT by surgeon, opt for surgical debridement; for compartment syndrome fasciotomy of the left leg +3 Pitting Edema to left lower extremity, wound boggy to left lateral lower leg and dorsal foot

Wound 1



Wound 2



Week 2

Wound sizes:
W#1: 13.0 X 4.0 X 1.1 cm; W#2: 11.0 X 8.0 X 0.8 cm
70% Fibrous tissue & +3 Edema, 100% Epibled Edges to the circumference of the wound, moderate drainage. Cleanse, pat dry, applied CA dressing, covered with GV/MB pre-moistened wide-cell PVA, wrapped with light compression to entire leg & foot, to be changed every three days

Wound 1



Wound 2



Week 10

Wound sizes:
W#1: Healed; W#2: 6.0 X 2.2 X 0.1 cm
Wound #1- Healed left open to air
Wound #2- Healing well w/ 100% granulation;
Edges w/ no epibole noted; Pain Level 0
Discontinued the GV/MB pre-moistened wide-cell PVA;
Started on GV/MB PVA, changing it twice a week



Closed: Week 22

Case 3: Diabetic Foot Ulcer with Gas Gangrene vs Necrotizing Fasciitis

49-year-old male: Diabetes type II (HbA1c 11), Hypertension, Hyperlipidemia



Initial Assessment

Presented with moist gangrene of the first and second Metatarsal to include the plantar area; US/Arterial: Severe vascular disease; monophasic waves in ATA, PTA, DPA bilaterally; pain Level 7 out of 10, requires morphine



Baseline

Wound size: 10 x 12.5 x 5.0 cm
S/P Trans-metatarsal amputation with debridement to the level of the fascia and resection of 1 and 2 metatarsals with bone exposure; NPWT with GV/MB pre-moistened wide-cell PVA and use of CA dressing in dehiscence and failed flap area; pain Level 4 out of 10



Week 1

Wound size: 10 x 12.5 x 5.0 cm
S/P Trans-metatarsal amputation of the right foot with bone exposure. Continued with NPWT with GV/MB pre-moistened wide-cell PVA and use of CA dressing in dehiscence and failed flap area. Patient states pain level has decrease significantly



Closed: Week 20