



# **Process Improvement: Second degree burns treated with a highly absorbent bacteriostatic foam impregnated with Methylene Blue and Gentian Violet\***

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## **STATEMENT:**

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The standard treatment for second degree burns presents many challenges. The treatment is labor intensive, causes pain, maceration, extended healing time, possible infection and may require an inpatient stay for intravenous medication and/or an oral medication regimen for pain relief. A new modality for second degree burns using highly absorbent bacteriostatic foam dressing impregnated with Methylene Blue and Gentian Violet was utilized. Product benefits include bacteriostatic protection, moist wound healing, and can be used in any setting. It was chosen for this patient with 30% total body surface area (TBSA) second degree burns for an at-home treatment.

## **CONCLUSION:**

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The use of a highly absorbent bacteriostatic foam dressing impregnated with Methylene Blue and Gentian Violet provided comfort, decreased dressing changes and helped maintain an optimal healing environment. The dressings, coupled with compression, allowed this burn patient to heal within six days without complications. The use of a highly absorbent bacteriostatic foam dressing impregnated with Methylene Blue and Gentian Violet for second degree burns was highly effective and beneficial to the patient's healing.

## Case Study:

Patient: 36-year old male with no prior medical history who received a gasoline fire burn to his face, chest and bilateral upper and lower extremities.

### Wound characteristics and prior treatment:

Patient transported to a Burn Center, diagnosed and treated at the hospital for 5% TBSA first and second degree burns. Patient was released on the same day and instructed to perform daily dressing changes at home with standard treatment supplies from the hospital, including 3% bismuth tribromophenate-petrolatum fine mesh gauze and topical bacitracin with a dry gauze wrap. The burn injury advanced to 30% TBSA within 36 hours with open and intact blisters noted. Patient reported escalated pain of 10+ on a 0-10 scale with standard burn dressing treatment applied.

### Treatment:

The patient was re-assessed at home by a trained burn nurse, who instituted a new treatment plan. The new daily home treatment plan included a shower, gentle removal of dead skin, and dressings of emollient, non adherent contact layer, non adherent contact layer with absorbent pad, and absorbent bacteriostatic foam dressings. The bacteriostatic foam dressing was applied to debrided burned tissue as a result of second degree burns. Compression was applied to lower extremities per best practice guidelines.

### Results:

- Full epithelialization was noted for second degree burn wounds in 6 days with treatment regimen, including absorbent bacteriostatic foam dressings and compression. After Day 6, patient no longer required home care services.
- Pain decreased to 0-2 on a 0-10 pain scale by Day 3, at which time pain medication was no longer needed.
- Dressing change frequency decreased from daily to every other day on Day 3 of this home care dressing regimen.
- Burn wounds showed no signs of infection or other complication during treatment.
- An in-patient hospital stay was avoided, benefitting the patient's overall health status in terms of prevention of nosocomial infection, and improved nutrition and psychological health. Receiving care at home increased his access to familial and community support systems, and drastically reduced expenses for his family.
- Use of an absorbent bacteriostatic foam dressing was effective and beneficial for second degree burns in this case.



Day 1: Second degree burns at home



Day 2: Absorbent bacteriostatic foam dressing was applied with mild compression over open intact and open blisters post debridement of devitalized tissue



Day 3: Left arm and leg debrided post absorbent bacteriostatic foam dressing application



Day 6: Burn wound healed and absorbent bacteriostatic foam dressings were discontinued. Compression hose instituted for daily use.



Day 25: Wounds are fully re-epithelialized at follow-up

  
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