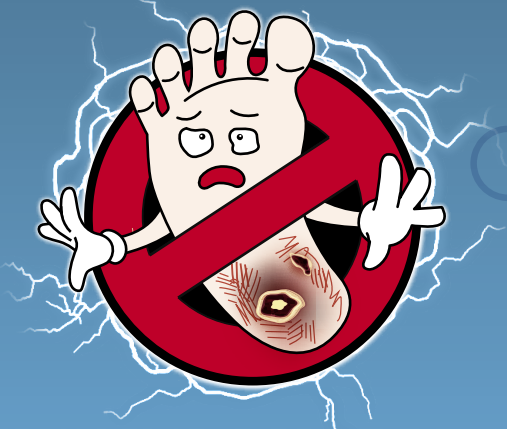


MANAGING HARD-TO-HEAL POST-SURGICAL WOUNDS USING ANTIMICROBIAL FOAM DRESSING; A CASE SERIES

Naqib MN, Nurul H, Nor Fadilah O, Norliza M, Syazwani AR
Klinik Kesihatan Kota Damansara, Selangor.



WOUNDBUSTERS
THE LEGACY



**D-FOOT INTERNATIONAL, APADLP &
5TH GLOBAL WOUND CONFERENCE 2023**



6TH -8TH OCT, 2023 • SUNWAY PYRAMID CONVENTION CENTRE, SELANGOR, MALAYSIA

Introduction

Managing chronic wounds has been a challenge in a primary care setting, specifically "hard-to-heal wound" as it fails to heal with standard therapy in an orderly and timely manner. In public health clinics particularly; time, manpower, cost, and patient convenience must be considered when managing hard-to-heal wounds. Public health clinics have observed delayed wound healing due to poor wound beds, i.e., thick biofilm, recurrent slough formation, and imbalanced moisture. Without the right approach and decision of dressing material, wound healing may be halted, or worse, become infected and may lead to other complications.

Methodology

This case series illustrated four patients with hard-to-heal post-surgical wounds complicated with biofilm encountered in a public health clinic. Antimicrobial foam with Methylene Blue, Gentian Violet, and Silver was used in all cases. Wound

cleansing, irrigation, debridement of skin edges and necrotic tissues, and wound dressing were done in a standard manner. Wound progress and number of visits to the public health clinic were recorded.

Discussion

This foam wound dressing has been designed to promote healing in chronic wounds by utilizing silver ion (Ag +), gentian violet (GV) and methylene blue (MB). Ag+ ions kill bacteria in the wound fluid absorbed by the dressing. GV works towards Gram-positive and some Gram-negative bacteria, as well as against yeast and bacteria. It can also act as analgesics. Methylene blue is strong cation that attracts negatively charged bacteria, protein-rich exudate and infectious material into the foam and does not harm any healthy living cells. This effective antimicrobial property provides sustained protection and prevention of biofilm formation and well-controlled exudates to create a favorable wound-healing environment. The dressing can be used for a large number of wounds with moderate to heavy drainage including diabetic ulcers, pressure ulcers,





arterial ulcers, venous ulcers, chemical burns, thermal burns, graft sites and surgical wounds. Using this dressing the first line of treatment can help prevent other interventions such as systemic antibiotic, repeated surgical debridement and negative pressure wound therapy. All four cases illustrated above showed significant improvements by rapid growth of granulation tissue, maintain moisture and increase epithelization. The use of this material resulted in faster recovery with a minimal number of visits to the clinic.

Conclusion

In conclusion, managing bacterial balance and exudates is important in hard-to-heal wounds, and the decision to use antimicrobial foam dressing resulted in a satisfactory outcome and decrease the incidence of wound complication related to infection. It can also enhance patient's convenience by reducing lengthy number of clinics visits and cost spent, hence ensure adherence. Ultimately, a quicker healing time could help save a healthcare facility staff time, manpower and money spent on managing complication's interventions.

REFERENCES

1. Revisiting A Novel Therapy In Wound Management. Dr. Harikrishna K. R. Nair MD FMSWCP. Wound Care Unit, Dept of Internal Medicine, Kuala Lumpur Hospital, Malaysia. Kuala Lumpur Wound Conference 2017, 29th Sept-1st Oct, 2017, Malaysia.
2. Case Series - Clinical Application of a Highly Absorbent Antimicrobial Polyurethane Foam in Malaysia. Dr. Lee Chin Yen^{1,2}, Dr. V.A. Jacob, Dr Gopidran A/L Muthusamy, Dato' Sri Dr. N. Premchandran. Wound Care Unit. Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia. Department of Orthopaedics, Hospital Tengku Ampuan Afzan: Kuantan, Pahang, Malaysia. Wound Care Unit, Hospital Kuala Lipis, Pahang, Malaysia. Kuala Lumpur Wound Conference 2017, 29th Sept-1st Oct, 2017, Malaysia
3. Case Report on Non Healing Venous Ulcer Utilizing RTD A Novel Broad Spectrum Antimicrobial Foam for Infection And Exudate Control. Noraishah M.R MD (UKM), Siti Norlaili Aiza MBCHB (LEEDS), Nazirah M.R MD (University of Brawijaya) Julizaayu RN, Mazliza Basharudin RN, Anita Roswati RN. Wound Care Clinic, Hospital Putrajaya, Malaysia. Kuala Lumpur Wound Conference 2017, 29th Sept-1st Oct, 2017, Malaysia
4. Case Report: The Usage of Broad Spectrumantimicrobial Foamc(RTD) in a Dressing of Surgical Site Infection. Mr Kam Ming Long, Dr Ooi Chen Huon, Mr Muhammad Suhairi bin Juhari, Dato Dr Suresh Chopra, Department of Orthopaedics, Hospital Sultanah Bahiyah.
5. Silver as an Antibiotic-Independent Antimicrobial: Review of Current Formulations and Clinical Relevance. Neel Vishwanath et al. Surg Infect (Larchmt). 2022 Nov.
6. The Antibacterial Action of Safranin and Gentian Violet. Falah Al-Khikani et al. Rambam Maimonides Med J. 2022.
7. Successful Management of Complex Pediatric and Neonatal Wounds With Methylene Blue and Gentian Violet Foam Dressings. Vita Boyar. Wounds. 2021 Oct.
8. A prospective evaluation of methylene blue and gentian violet dressing for management of chronic wounds with local infection. Kevin Y Woo et al. Int Wound J. 2017 Dec.

CASE 1	CASE 2	CASE 3	CASE 4
 <p>7-8-2023 7-9-2023</p>	 <p>14-8-2023 20-9-2023</p>	 <p>11-8-2023 1-9-2023</p>	 <p>15-8-2023 29-8-2023</p>
<p>65-year old diabetic male with right calf post saucerization for right calf carbuncle. He presented with moderate exudate and slough over large wound with exposed tendon. Antimicrobial foam with Methylene Blue, Gentian Violet, and Silver was applied day 10. The size of the wound reduced and granulation tissue seen at day 41. Total number of visit are 8 visits.</p>	<p>60-year old male, presented with post ray amputation of left big toe. Antimicrobial foam with Methylene Blue, Gentian Violet, and Silver was started at day 7. The size of the wound reduced and epithelization seen within 5 weeks. Total number of visit are 7 visits.</p>	<p>A 56-years old male, post-saucerization of the back for carbuncle. Received twice a week regular dressing using Antimicrobial foam with Methylene Blue, Gentian Violet, and Silver. The wound showed accelerated reduction in size following next 4 weeks. Epithelization was seen within 3 weeks. Total number of visit is 5 visits.</p>	<p>A 72-year old male with day 9 post wound debridement for Infected Right BKA Stump. At presentation edge of wound macerated with highly exudative wound and presence of slough. Significant granulation tissue was seen within 3 weeks after applying antimicrobial foam with Methylene Blue, Gentian Violet, and Silver over 2-3 days regular visits to clinic. Total number of visit is 5 visits.</p>



SOZA HEALTHCARE Sdn Bhd

