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.

Abstract

- Healthcare professionals are increasingly being challenged by the non healing venous ulcer. Friedberg et al. found out that the people aged over 70 years old, the prevalence of venous ulceration is close to 13%[1].
- 'Hard to heal' wounds may have a large surface area, with a duration of months or years, and the presence of fibrin on more than 50% of the wound surface area[2].
- Despite using limb compression, debridement, skin grafting and / or dressing therapies as interventions in the treatment of venous leg ulcers, reports still indicate that around 20% of these wounds remain unhealed after 50 weeks or more of therapy[3].
- A study was conducted using Retro Tech Dressing (RTD) a novel broad spectrum antimicrobial foam dressing on 5 non healing venous ulcer. These wound duration ranges from 1 month to 3 years and have been treated with multi modalities available in the country.
- The study is still on going and to date we have seen significantly marked improvement in all cases studied with varying degree of wound closure.

Introduction

- Non healing venous ulcer has shown negative impact to patient's quality of life.
- Enoch & Price state that "it is important to appreciate and acknowledge that some chronic wounds are resistant to all efforts and treatments aimed at healing"[4].
- Biofilms are found in 60% of chronic wounds.
- In this case series, a new broad spectrum antimicrobial foam (RTD) is used to get the infection under control so that the wound can heal normally. This dressing is a propriety highly absorbent broad spectrum antimicrobial foam conatining Methylene Blue, Gentian Violet and Silver Ion integrated into the polymer matrix.

Methodology

- 6 patients were selected for their non healing venous ulcer ranging from 1 months to 3 years.
- All 6 cases were seen twice weekly at Wound Care Clinic, Hospital Putrajaya.
- Their wounds were cleaned and RTD dressing applied covering the wound bed, secured with gauze. All of them were put on 2 layer compression bandage.

Result

- All 6 cases showed sign of healing. The wound area started to reduce in terms of the length and width in all cases.
- The percentage of wound reduction was 25 to 100%.
- Case 1 - A 59 years old female patient developed venous ulcer at left lateral leg after scratching the skin due to itchiness. She had daily dressing at general clinic however wound doesn't show any sign of healing after more than 1 month.
- She was started with RTD dressing and after 27 days the wound was totally healed.
- Case 2 - A 76 years old female patient with recurrent venous ulcer left leg. After 5 weeks using RTD dressing, the wound totally healed.
- Case 3 - A 58 years old female patient with 1 month old venous ulcer at right calf. After applied RTD dressing, the wound edge have shrunk more 60% in size plus healthy granulation and epithelialization seen throughout the wound.
- Case 4 - A 69 years old male patient with long standing venous ulcer for the past 2 years plus. After 7 months the wound healed.
- Case 5 - A 57 years old male patient with venous ulcer enveloping left leg for 3 years prior to start RTD dressing. In 3 months plus marked improvement was seen with twice weekly RTD dressing.
- Case 6 - A 63 years old male patient suffering from right foot venous ulcer for the past 2 years. After 9 months plus, the wound size was reduced significantly.

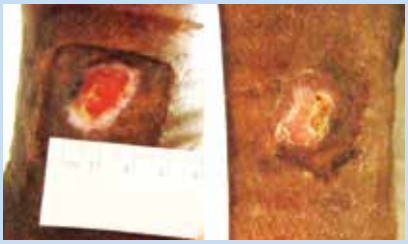
Conclusion

- In all 6 cases, infection was well controlled leading to healthy tissue granulation and wound closure.
- The combination of methylene blue, gentian violet and silver plus singlet oxygen exerts a synergistic and powerful microbial killing for both fungi and bacterial. The presence of surfactant in RTD dressing helps in inflammation reduction and the foam with a good capillary suction helps in exudate management.

References

1. *Friedberg EH, Harrison MB & Graham ID. Current home care expenditures for persons with leg ulcers. J Wound Ostomy Cont Nurs 2002; 29:186-192.*
2. *Margolis DJ, Berlin JA & Strom BL. Risk factors associated with the failure of a venous leg ulcer to heal. Arch Dermatol 1999; 135(8) :920-926*
3. *Barwell JR, Davies CE, Deacon J, Harvey K, Minor J & Sassano A. Comparison of surgery and compression with compression alone in chronic venous ulceration (ESCHAR study): randomized controlled trial. Lancet 2004; 363(9424) :1854-1859. 3.*
4. *Enoch S & Price P. Should alternative endpoints be considered to evaluate outcomes in chronic recalcitrant wounds? World Wide Wounds. Available at: www.worldwidewounds.com/2004/october/Enoch-Part2.*

Case 1 – 59 years old female
1 month plus old venous ulcer



Before | After 27 days

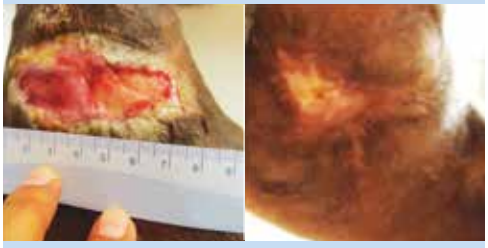
Case 2 – 76 years old female
Recurrent venous ulcer

Before | After 41 days

Case 3 – 58 years old female
1 month old venous ulcer

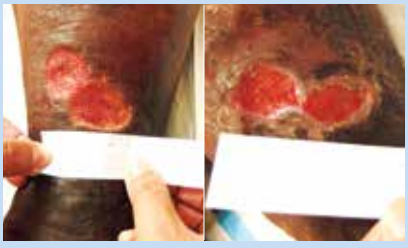
Before | After 60 days

Case 4 – 69 years old male
2 years old venous ulcer



Before | After 215 days

Case 5 – 57 years old male
3 years old venous ulcer



Before | After 106 days

Case 6 – 63 years old male
2 years old venous ulcer

Before | After 297 days