

# HOLISTIC APPROACH TO CHRONIC WOUNDS LEADS TO WOUND HEALING IN TWO CASE STUDIES.

Elad A. Koren RN BSN. Leumit, 1 Amos St, Geula, Jerusalem, Israel. korenelad@gmail.com

## Introduction

In the past 30 years the incidence of diabetes among the world's adult population has nearly quadrupled, rising to over 422 million adults worldwide with a 1-in-4 risk of diabetic foot ulceration during an individual's lifetime.<sup>1</sup> The management of two patients with chronic diabetic ulcers of 24 months duration, details the importance of the appropriate management of diabetic ulcers. Both patients had a history of diabetes mellitus and venous insufficiency and were treated at home and in the wound-care centre in Jerusalem, Israel.



Figure 1



Figure 2



Figure 3



Figure 4

The first patient was 56 years of age and had 3 diabetic foot ulcers on his left foot. He had a medical history of HbA1C deterioration for 4 years and had a mild anxiety disorder. On initial assessment in the community the first wound was 7cm (diameter) x 12mm (depth), with yellow slough in the wound and visible tendons on the dorsal aspect of the foot (fig 1). The second wound on his third toe was black and unstable with yellow exudate. The third wound was round and superficial on the medial aspect of his first metatarsal, 25mm (diameter) covered with adherent yellow, slough. Previous treatments with antimicrobial cleansers, larvae, antibiotic therapy, mechanical debridement, and a variety of other dressings were unsuccessful and he ultimately lost his third toe. The residual wound was producing a large amount of yellow exudate and a cavity was expanding through most of the foot when the patient was re-assessed.

The second patient was 81 years of age and lived with his wife. He had a previous medical history of ischaemic heart disease, mild congestive heart failure, mitral regurgitation and mild nephropathy. An assessment of both legs was undertaken by the Tissue Viability Nurse. Both legs were found to be oedematous with extremely dry skin. There was a wound to the medial aspect of his right lower leg measuring 11cm x 7cm x 1cm, with a dry, sloughy wound bed (fig 2). Previous treatments with hydrogels, honey alginate, super-absorbent dressings, negative pressure wound therapy, and antibiotic therapy were all unsuccessful. The wound was 10cm x 8cm x 3mm when the patient was re-assessed.

## Method

The treatment plan for both patients involved a holistic approach using a multidisciplinary wound care team involving a schedule of dressing changes to be completed by family members and the nurse, a dietary assessment, and regular blood sugar checks. An Enzyme Alginogel was chosen for both patients for its moisture management, debridement, and ability to control infection.

The first patient was commenced on Flaminal® Forte (Flen Health), on a daily basis via syringe into the cavity wound of the foot. The second patient was prescribed Flaminal® Hydro (Flen Health) for the dry skin of both legs, to be spread thinly twice a day and Flaminal® Forte was commenced for daily treatment of the leg wound.

### References

- 1) World Union of Wound Healing Societies (WUWHS), Florence Congress, Position Document. Local management of diabetic foot ulcers. Wounds International, 2016.
- 2) Beele H, Durante C, Kerihuel S, Rice S, Rondas A, Stryja J, White R (2012) Expert consensus on a new enzyme alginogel. Wounds International 3(2):42-50

## Results

The first patient had 4 months of Flaminal® treatment with a reducing volume of Flaminal® required as the wound reduced in size. On day 3 of treatment 57g was used and on day 105 only 13g was required. Exudate levels reduced and the wound showed a significant decrease in size and depth, including new granulation tissue over the tendons and full epithelialisation of the wound to his first metatarsal. Twenty-nine months after initial treatment the patient has one 1cm wound on the dorsal aspect of the foot and is receiving a weekly dressing with a silicone net dressing (fig 3). The process of controlling blood glucose levels is ongoing.

For the second patient, after 9 weeks of treatment the size of the wound reduced to a superficial, red and small wound of around 15mm diameter (fig 4). At this point a silicone elastic wrap dressing was added to ensure a firm and flat scar.

Both patients are progressing to full and healthy skin closure. Moreover, having monthly multi-disciplinary team meetings with the patients and family members seems to have had a positive effect on the patient's wellbeing.

## Discussion

These case studies underline the importance of holistic care, where one clinician acts as coordinator of multidisciplinary care to ensure that appropriate referrals are made and that care is integrated.<sup>1</sup> Flaminal® possesses multiple modes of action and expert consensus concluded that its key functions are: continuous wound debridement, antimicrobial activity, maintenance of a moist wound healing environment, and protection of wound edges and epithelial cells.<sup>2</sup>

## Conclusion

The management of these chronic wounds demonstrates the way that Flaminal's effective mode of action can be used as part of a holistic wound treatment plan.