MANAGEMENT OF A COMPLEX DFU WITH NPWT AND TLC-AG INTERFACE LAYER FOLLOWED BY TLC-NOSF DRESSINGS.

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INTRODUCTION

Negative pressure wound therapy (NPWT) is a method that uses sub-atmospheric pressure aimed at promoting and optimising wound healing in diabetic foot[1]. The main mode of action of NPWT is aimed at reducing the inflammatory exudate while keeping the wound moist, inhibiting bacterial growth, and promoting the formation of granulation tissue[2, 3]. One draw back noted in literature is that the removal of the NPWT foam dressing is a source of procedural pain for many patients which often requires prescription of oral analgesics. This pain leads to some patients asking to discontinue treatment[4, 5]. Technology Lipidocolloid contact layer dressing (UrgoTul®, Urgo Medical, France; TLC) is an example of a nonadherent wound contact layer that can be utilized between the NPWT reticulated foam and the wound bed to avoid pain on removal5 but also enhance healing[6].

Non-adherent and non-occlusive mesh dressings with Technology Lipido-Colloid with Silver (TLC-Ag, UrgoTul Ag® – Laboratoires Urgo, France) are indicated for wounds that are presenting with signs and symptoms of local infection or are at risk of infection[7]. The efficacy of the TLC-Ag mesh dressing has been shown both in in-vitro studies[7], in a sequential randomised control trial[8], in a prospective, multicentre, observational study, 728 patients with wounds of various aetiologies[9], as well as in other case studies, including a case study from India[10].

METHOD AND OBJECTIVE

The authors evaluated the TLC-Ag dressing in combination of NPWT as part of a larger case series[11]. In this case presentation, the TLC-Ag was utilised for the two purposes mentioned previously, i.e. atraumatic dressing removal and enhanced healing, but also to take advantage of the antimicrobial properties of the dressing.

THE CASE

A 56-year-old female with long-standing type 2 diabetes presented to the emergency department with blistering and necrosis of the heel and lateral aspect of the sole (left foot), accompanied by foul smelling pus discharge [Figure **1A**]. X-ray showed osteomyelitis of the calcaneum. An initial surgical debridement was performed and all tissue on the lateral aspect of the foot and on the sole, extending from the metatarsophalangeal joint area of T5 up to the heel, was excised. The osteolytic part of the calcaneum was also removed [Figure **1B**]. The patient was started on antibiotics.

NPWT at -125mmHg was applied, with the TLC-Ag dressing used as an interface layer. After five days, healthy granulation tissue was noted in more than 70% of the wound, with good granulation cover over the calcaneal stump and very little slough [Figure **1C**].

Following this, the dressing was changed to a polyabsorbent fibre dressing with TLC-Ag.

By week 10, the wound appeared healthier, and the treatment was changed to TLC-NOSF (UrgoStart, Laboratories Urgo), with wound closure achieved by week 13 [Figure **1D**].

In both cases, the TLC-Ag interface layer provided an antimicrobial effect as well as acted as an interface layer to prevent adherence of the reticulated NPWT foam.

Fig. 1A - Wound appearance on presentation

Fig. 1B - Wound following post-surgical debridement

Fig. 1C - Wound at the first dressing change, 5 days post-debridement

Fig. 1D - Wound at week 13, after 3 weeks of treatment with TLC-NOSF

CONCLUSION

The TLC-Ag interface layer provided an antimicrobial effect as well as acted as an interface layer to prevent adherence of the reticulated NPWT foam. The use of TLC-NOSF assisted in rapid granulation and final closure after resolution of infection.

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