A TREATMENT OF AN INFECTED DIABETIC FOOT ULCER WITH FLAMINAL AND KERRAPED PLANTAR ULCER

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Introduction

Foot complications are common in diabetes. Around 5% of people with diabetes may develop a foot ulcer in any year, and amputation rates are often around 0.5% per year. Where neuropathy and ischaemia lead to ulceration (especially with poor glucose control), the foot can become infected and it may need to be amputated if the infection is not managed appropriately. Clinical guidelines state that neuropathy and peripheral vascular disease are secondary to poor blood glucose control and adverse arterial risk factors (such as smoking or dyslipidaemia).1

This case study assesses the wound management of an 80 year old male with very limited mobility who had a diabetic foot ulcer of unknown duration in his right styloid process. He had a previous medical history of type 2 diabetes, monophasic nephropathy, dyslipidaemia, and was an ex-smoker. Antibiotics were commenced due to clinical signs of infection. Inadine dressings (Systagenix) were continued to keep the wound dry until the patients vascular status had been established. The ulcer was first seen by the diabetic podiatrist on the 17th January, 2014. On examination the wound was 15mm² with 100% sloughy base (Image 1).

Method

The aim was to treat the infection, to debride, offload the area, and promote wound closure. As the patient was unsuitable for sharp debridement the primary dressing chosen was Flaminal Forte (Crawford Healthcare) with Melonol as a secondary dressing. Kerraped Plantar Ulcer (Crawford Healthcare) was also used to offload pressure from the ulcer site.

Results

Flaminal Forte was initially used to debride and deslough the wound. The products gel composition stayed in place well on the wound. The dressing regime was changed to Flaminal Hydro Gel (Crawford Healthcare) on 2nd May, 2014 as the exudate levels had decreased. Due to recurrent infections the gentleman had been prescribed oral antibiotics on 3 occasions and was commenced on silver dressings on 29th August, 2014, but re-commenced Flaminal Forte on 2nd September, 2014. Subsequently, Flaminal was stopped on 29th September, 2014 as the wound contained 100% granulation tissue. The wound had healed by 19th December, 2014, 11 months post initial diabetic podiatry assessment. Kerraped Plantar Ulcer was used throughout treatment.

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Discussion

The serious complications that can arise from diabetic foot problems can have a considerable impact on the individual and also on health services but can be delayed or prevented with appropriate and careful management. Limited clinical trial data suggest that healing is improved by the use of hydrogels to debride diabetic foot ulcers.1 Flaminal is an amorphous alginate hydrogel dressing with a unique antimicrobial enzymatic complex containing glucose oxidase and lactoperoxidase. It continuously debrides necrotic tissue and bacteria, thus removing it from the wound bed where it may otherwise inhibit healing. The enzyme system selectively targets the microbial cell wall of entrapped microorganisms without damaging cells involved in wound healing.2 A previous evaluation study concluded that it was one of the few dressings that addressed each aspect of the T.I.M.E framework by debridging non-viable tissue, treating infection, maintaining a correct moisture balance, and protecting the wound edges.2 Both laboratory and clinical evidence indicate that Flaminal is safe and effective both clinically and microbiologically.2 Flaminal Hydro Gel is indicated for low to moderate exuding wounds whilst Flaminal Forte is indicated for moderate to heavily exuding wounds.

The benefits of using Flaminal in this case were its ease of application and it’s economical use as the tube could be recapped and re-used on the same patient. Flaminal generally controlled infection well, and although the gentleman required repeated prescriptions for oral antibiotics, this may have been due to his urinary incontinence running onto his feet. Flaminal was also beneficial as sharp debridement was not an option due to the vascular status of the patient.

One way of achieving effective off-loading of pressure for patients with diabetic foot problems is the use of therapeutic footwear.3 Kerraped Plantar Ulcer can help treat and prevent foot ulcers, particularly in diabetic patients, by off-loading pressure from the ulcer or area at risk of ulceration. It has an 18 mm thick insole with easily removable pegs to allow selective off-loading. A previous study demonstrated that when the pegs were removed from the insole pressure readings revealed that Kerraped Plantar Ulcer was superior to a post-operative sandal and achieved complete off-loading at a healed plantar ulcer site.4

Conclusion

This case study demonstrated the effective treatment of this chronic diabetic foot ulcer using Flaminal and Kerraped Plantar Ulcer. Flaminal proved its ease of use, effective debridement, controlled infection and was cost effective whilst Kerraped Plantar Ulcer was consistently used throughout treatment to off-load pressure from the diabetic foot ulcer.

References

(1) McIntosh A, Peters L, Young R et al. Prevention and management of foot problems in Type 2 diabetes: Clinical Guidelines and Evidence. Sheffield, University of Sheffield
(3) Berrington R (2011) Flaminal®: It’s About T.I.M.E. Wounds UK poster presentation

Image 1: 17th Jan, 2014 wound measured 15mm² with 100% sloughy base

Image 2: 29th Sept, 2014 100% granulation tissue

Image 3: 19th Dec, 2014, wound fully healed

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