

KerraLite Cool for the Treatment of a Painful Venous Leg Ulcer in a Type 1 Diabetic Patient

Dr Charalambos Agathangelou

PhD In Medical Gerontology/Dermatology – Director Of Dhali Community Geriatric Home, Dhali Community Geriatric Home, 111 Adonidos Avenue, 2540, Dhali, Cyprus. c.agathangelou@cytanet.com.cy

Introduction

For almost two decades it has been proven that venous leg ulcers are painful, reduce quality of life, and affect daily activities and self image.¹⁻³ Hoffman *et al* 1997 studied 94 patients, 90% complained of pain, 64% of which reported unbearable pain that affected their sleep.

Early recognition and management of pain will encourage concordance with treatment, including compression, which may in itself be painful or uncomfortable.

This case study outlines the care and interventions given to an 87-year-old male, with type I diabetes and mild heart failure, living alone, who developed a painful venous ulcer.

The patient

Mr Peters* had been prescribed metformin 850mg twice daily and Frusemide 40mg daily; however, he did not adhere to his diet, and his diabetes was uncontrolled. His mobility was poor and he was incontinent of urine; as he was unable to afford 'nappies'. Urine was affecting the ulcer situated on the medial aspect of the lower right gaiter. He was not concordant with treatments offered by the government hospital, partly because he had no one to escort him to appointments, so was referred to our voluntary Home for day care and wound management.

The wound

Previous treatments included a six-week regimen of cleaning the wound with 10% povidone iodine solution (Betadine) and covering with 10% povidone iodine ointment. This was unsuccessful, so hyaluronic acid and sliver sulphadiazine cream were used, again without improvement.

On assessment the wound (Figure 1):

- measured 9cm x 3cm
- had been present for six months
- was covered with a hard, dark brown eschar, with some yellow slough in the centre; exudate was minimal
- was malodorous and the patient complained of pain – scoring 10 on a visual analogue scale
- was not infected as confirmed by clinical appearance and swab



Figure 1: Wound measured 9x3cm prior to treatment with KerraLite Cool™

The leg was swollen and painful to touch; dependent ankle oedema was present upon standing or sitting for a while, indicating that the veins were stretching and leaking fluid.

Doppler assessment showed an ABPI of 0.9, so he was suitable for compression therapy. The patient refused surgical debridement as he had experienced this on three previous occasions, and he felt he could not cope with the pain; he also claimed that the wound always looked the same 72 hours after debridement.

Treatment Plan

The initial goal was to control his diet, minimise pain, reduce odour and instigate autolytic debridement to clean the wound bed and give it a chance to heal.

KerraLite Cool™ (Crawford Healthcare) was chosen as it facilitates painless debridement of the wound bed through a combination of autolytic and osmotic debridement^{4,5} (Ivins 2013, Denyer 2013). The eschar was lifted from the wound bed by a chemical pull created by the strong osmotic nature of the gel. Furthermore, this osmotic pull draws fluid into the wound bed from underlying tissues, thereby maintaining a moist wound healing environment. In addition, this dressing has the ability to maintain its gel consistency even if there is a reduction in the wound exudate, ensuring that it will not adhere to or dry the wound bed.

Dressing changes were done every 48 hours; his pain fell from 9 to 6 after the first dressing change, dropping to 0 after ten days. Initially, he refused compression, but at the 4th dressing change, agreed to wear an elastic bandage; however, he kept removing this as he wanted to be able to see the wound. Therefore, we provided him with below knee compression stockings. The patient was provided with 'nappies' to prevent the wound getting contaminated with urine, and further dietary advice given.

Clinical outcomes

A significant improvement could be seen after only 48 hours. The dry eschar was lifted from the wound bed and removed (Figure 2). After 10 days the patient reported no pain, the odour had diminished. The wound progressed to healing (Figure 3).

Conclusion

KerraLite Cool not only debrided the wound bed, but continuously cleansed the wound until healing was reached. In regard to relieving pain, facilitating self-management of the wound and conformability, Mr Peters rated the dressing as excellent and easy to use.

These results demonstrate that a regimen of KerraLite Cool and appropriate compression, promoted healing,



Figure 2: Dry eschar was lifted from the wound bed and removed



Figure 3: Wound continued to progress through to healing

managed light to moderate exudate well, preserved the integrity of the surrounding skin, reduced pain/discomfort, and was easy to use. KerraLite Cool therefore is a suitable option for the management of dry/low exuding leg ulcers.

References

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- *pseudonym
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