How effective is larval therapy in the debridement of chronic diabetic wounds?

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Clinical Issue

Chronic diabetic wounds are complex and often difficult to treat due to multifactorial problems such as neuropathy and peripheral arterial disease (Haycock and Chadwick, 2012). Due to co morbidities, diabetic patients tend to have severe septic wounds in the lower leg and foot region, which can result in chronic wounds that have delayed healing and an increased risk of infection. Infection in chronic wounds accounts for a large percentage of diabetic hospital admissions and is a major risk factor for traumatic and non-traumatic amputation (Pettican and Baptista, 2012), therefore effective wound treatment is essential.

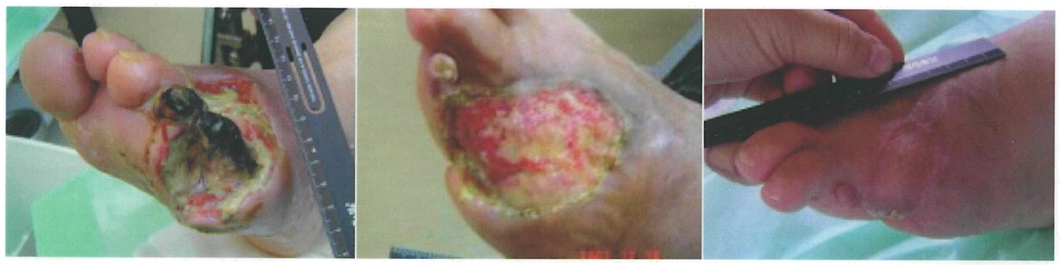

Image 1, Larval Therapy

Larval therapy

The process by which larvae debrides a wound is complex, but in simple terms they physically feed on the necrotic tissue within a wound by releasing a mixture of enzymes into the wound that breaks down and liquifies the tissue so that it can be easily digested by the larvae (Griffin, 2014).

Advantages

A literature review on this topic found that when compared to hydrogel dressings, larval therapy took a significantly shorter period to debride wounds, with less dressings needed (Rafter, 2013). Larval therapy can be applied by a nurse, which means shorter waiting for debridement treatment

Disadvantages

There is a stigma called the "Yuk Factor" that can accompany larval therapy indicating that some patients are not comfortable with having the larvae "writhing" in their wounds. Larval therapy can be painful for some patients as they can feel the movement of the larvae, which requires the need for analgesics (Griffin, 2014).

Recommendations

Effective wound bed preparation and debridement needs to be as non traumatic and painless as possible for the patient (Rafter, 2013), therefore adequate pain relief and reassurance are an essential factor in this therapy.

Larval therapy is ideally suited to wounds that have a moist environment with slough and necrotic tissue, however it is essential to screen patients for pseudomonas infections, as the larvae will not consume this infected tissue (Griffin, 2014).

Patient's undergoing larval treatment must be educated on the procedure and projected outcomes so that they have a good knowledge of the therapy before they consent to treatment.

Diabetic patients should be evaluated on their neurological and vascular status, blood glucose levels and assessed for smoking and their nutrition, as these are all important in a patient's healing process (Haycocks and Chadwick, 2012).

Conclusion

Larval therapy has become recognised as an effective technique in the treatment of complex chronic wounds, and current studies have suggested it is more effective than the standard hydrogel dressings (Griffin, 2014). The literature suggests that more research is needed to fully evaluate the effectiveness of larval therapy, however patient response to it has been positive and reports of pain were easily treated with oral analgesics.

References

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Haycocks, S., & Chadwick, P. (2012). Debridement of diabetic foot wounds. *Nursing Standard.* Retrieved from http://journals.rcni.com/doi/abs/10.7748/ns2012.02.26.24.51.c8947?journalCode=ns

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Image 1. Retrieved from: http://www.btmcl.com/eng/

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PECOT (Whitehead, 2013)

PECOT category	Information relating to question	Explanation
Population	Diabetic patients with chronic wounds that have resulted from their diabetes diagnosis and co-morbidities	The population of diabetics who develop leg ulcers due to venous insufficiency is large, and can result in leg amputation if not treated effectively.
Exposure (intervention)	Diabetics that have been treated with larval therapy	I will be looking for articles that have researched the effectiveness of larval therapy, and the time it takes to debride the ulcer compared to other treatments. I will also looks at research that talks about the attitudes that patients have towards larval therapy and how that may affect treatment.
Comparison/ Control	Other debridement therapies such as hydrogel dressing and surgical debridement	I will research that compares surgical debridement and hydrogel dressings to larval therapy
Outcome	Complete debridement of necrotic tissue, which leads to improvement in healing of leg ulcers	Studies where debridement is successful will prove how effective this treatment is.
Time	Not applicable	Time for the treatment to be successful can vary with each patient.