

# Management of a chronic leg ulcer using Biatain® Silicone Adhesive

## Introduction

This case study describes the management of a patient who sustained a simple bite in 2005, which led to lower leg ulceration measuring approximately 8cms x 8cms. Initial treatment failed to heal the wound, but finally the use of Biatain Silicone adhesive reduced the exudate and provided comfort and increased confidence for the patient.

## Previous Treatments

This patient, a 43 years old female, suffered a mosquito bite whilst on holiday which became inflamed and appeared infected. On return, an ulcer had developed and her GP prescribed a week-long course of antibiotic therapy, with no improvement. She was then treated with a number of different dressing regimens, mainly basic foam dressing to manage exudate. After six months, the ulcer had shown further signs of deterioration. In January 2007, a Doppler examination confirmed that she would be able to tolerate compression therapy alongside wound dressings which would manage the exudate and promote wound healing. Initially, the ulcer seemed to improve and over the following 12 months, the dressing regimen continued. However, by November 2010, the ulcer had deteriorated slightly and a referral was made to the Vascular Nurses at Royal Blackburn Hospital.

## Treatment Regimen

Now the wound was approximately 6cms x 5cms x 0.5cms, with 80% slough. The leg showed signs of oedema. Various treatments regimens, including honey dressings, were used and while promising signs of improvement were seen, these were not maintained. The patient felt at this point, that she was always going to have an ulcer. On the 30th May 2012, Biatain Silicone adhesive was commenced under compression hosiery. The ulcer measured 5cms x 5cms x 0.5cms (*Figure 1*). The soft silicone provided comfort and a perfect seal whilst allowing the skin to breathe. The absorbent polyurethane foam contained the exudate and the unique 3D foam conformed to the shape of the ulcer. It also allowed her to shower on a daily basis.

One dressing was applied every week with compression.

## Results

After one week the patient returned to us; the ulcer had reduced significantly in size and looked healthy. The patient reported that the ulcer had been at its most comfortable in years. Over the next two months the ulcer continued to heal. At the time of writing, 25th July, the ulcer was almost healed (*Figures 2-7*). The remaining wound bed is clean with no exudate and the surrounding skin is healthy. The patient has had no pain throughout the treatment.



Figure 1 - Wound prior to application of Biatain Silicone adhesive

## Conclusion

Only a few studies describe ‘hyper’ reactions to mosquito bites and these relate primarily to exploring the underlying cause of the extreme reaction<sup>1,2,3</sup>. Others have described treatment regimens<sup>4</sup>, or other possible causes of ulcerated bites such as those from sandflies and spiders<sup>5</sup>. This long-standing ulcer therefore presented a huge management challenge. Indeed, before the patient was referred to the vascular nurse team, the patient had been living with this ulcer for almost 7 years. Her confidence has now been restored and she feels independent once again. The whole experience of the ulceration has been quite negative over the years until finally a dressing was found which has almost healed the ulcer within 8-10 weeks.

Figure 2 - 6th June 2012



Figure 3 - 13th June 2012



Figure 4 - 27th June 2012



Figure 5 - 4th July 2012



Figure 6 - 11th July 2012



Figure 7 - 25th July 2012



## References

1. Ishihara S, Ohshima K, Tokura Y, et al. (1997) Hypersensitivity to mosquito bites conceals clonal lymphoproliferation of Epstein-Barr viral DNA-positive. Natural killer cells. Jpn J Cancer Res 88: 82–87/ 2. Ohsawa T, Morimura T, Hagari Y, et al. (2001) A case of exaggerated mosquito-bite hypersensitivity with Epstein-Barr virus-positive inflammatory cells in the bite lesion. Acta Derm Venereol. 81 (5): 360-3 3. Kanno H, Onodera H, Endo M, et al. (2005) Vascular lesion in a patient of chronic active Epstein-Barr virus infection with hypersensitivity to mosquito bites: vasculitis induced by mosquito bite with the infiltration of nonneoplastic Epstein-Barr virus-positive cells and subsequent development of natural killer/T-cell lymphoma with angiodestruction. Hum Pathol. 36 (2): 212-8 4. Chaffey R. (1997) Case study: Larval therapy for an infected insect bite. World Wide Wounds. www.worldwidewounds.com/1997/october/LarvalTherapy/LarvalCaseStudy.html 5. Keystone J. (2012) Skin & Soft Tissue Infections in Returned Travelers. Centres for Disease Control and Prevention. wwwnc.cdc.gov/travel/yellowbook/2012/chapter-5-post-travel-evaluation/skin-and-soft-tissue-infections-in-returned-travelers.htm