

# MANAGEMENT OF PSEUDOMONAS INFECTED BILATERAL LEG ULCERS WITH FLAMINAL®

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## Introduction

Approximately 1-2% of the population will suffer from the chronic disabling condition of leg ulceration, with chronic venous insufficiency affecting up to 50% of the adult population (Venous Forum, 2011). It is recognised that about 70% of ulcers are venous in origin, 10-15% are arterial, with a proportion of leg ulcer patients (about 15%) having mixed aetiology of both venous and arterial disease (Briggs and Closs, 2003).

This case study describes the management of Mrs W, a 73-year-old female with bilateral, circumferential, mixed aetiology ulceration. Mrs W lives alone but with good family support. Her mobility had decreased to a point where she required the assistance of two people for transfer and was admitted to hospital as she was unable to weight bear at all.

The ulcers were assessed following clinical guidelines from the Royal College of Nursing [RCN] (2006) which recommend an assessment together with Doppler readings. Unfortunately due to extensive ulceration

Mrs W was unable to tolerate inflation of the sphygmomanometer cuff, although foot pulses were present when located with the Doppler probe. Mrs W's needs were complex due to her medical history of hypertension, ischaemic heart disease, myocardial infarction, gastritis, diverticulitis, polymyalgia, fibromyalgia and osteoporosis.

## Method

Mrs W had an ulcer measuring 14cms x 10cms on her left leg which was 100% sloughy (Figures 1 and 2), and two areas of ulceration on her right leg measuring 6cms x 3cms and 2cms x 1.5cms comprising 50% slough and 50% necrotic tissue (Figures 3 and 4). The wounds to both legs were heavily exuding, painful and also malodorous with *Pseudomonas* spp isolated from a wound swab sent for culture and sensitivity. These factors combined, caused Mrs W heightened levels of pain and anxiety, which became more acute at dressing changes. Patients describe wound-related pain as all-encompassing and as one of the most devastating aspects of living with a chronic

wound (WUWHS, 2007). Previous treatments tried in the community included honey and hydrofiber dressings which had increased Mrs W's pain and anxiety level.

The aims of treatment were to autolytically debride the necrotic and sloughy tissue whilst protecting the delicate granulation tissue and peri-wound skin. Additional considerations were pain management, reduce wound bioburden and control exudate levels. Flaminal® Hydro was commenced to debride the devitalised necrotic tissue, whilst Flaminal® Forte was selected for the wet and sloughy areas and to reduce the wound bioburden.

Mrs W was also commenced on intravenous antibiotics due to systemic infection. A soft silicone dressing was selected as the secondary dressing to minimise the potential for pain and trauma to the skin, already damaged by oedema and excoriation. Surgipads were used to cover and absorb exudate; these were secured with orthopaedic wool and a crepe bandage from toe to knee, thus minimising the risk of further trauma and avoiding the need for adhesive dressings or tape on such fragile tissue.



Figure 1.  
Left Lateral



Figure 2.  
Left Medial



Figure 3.  
Right Lateral



Figure 4.  
Right Medial



Figure 5.  
Left Lateral



Figure 6.  
Left Medial



Figure 7.  
Right Lateral



Figure 8.  
Right Medial

Dressings were changed every two days with Mrs W having morphine sulphate immediate release oral solution (Oramorph) prescribed for immediately prior to the procedure.

## Results

There was a marked improvement with the new dressing regimen within seven days and dressing change was reduced to three times a week, with reduction in oedema and improvements to the peri-wound skin.

The introduction of Flaminal® Forte combined with a silicone secondary dressing reduced pain and trauma, controlled exudate and reduced wound bioburden (Figures 5-8). The dressing regimen was acceptable to Mrs W since there was a marked reduction in pain at dressing change which reduced her anxiety levels. As the bioburden in the wounds reduced and the slough and necrotic tissue were debrided there was a concomitant reduction in exudate levels. This in turn permitted time between dressing change to be increased to only twice weekly prior to her discharge home

## Discussion

A heavy bacterial burden in a wound encourages tissue degradation and slough formation, thus preventing healing. Flaminal®, an enzyme alginogel, is an antimicrobial dressing; Flaminal® Hydro is indicated for lightly to moderately exuding wounds whilst Flaminal® Forte is indicated for moderately to heavily exuding wounds. It contains two naturally occurring antimicrobial enzymes, glucose oxidase and lactoperoxidase which kill bacteria without damaging healing cells (White 2006). Flaminal® has the capability to absorb excess exudate while remaining in a gelled state, promote debridement, control wound bioburden and reduces pain at dressing change.

## Conclusion

Debridement and reduction in wound bioburden were facilitated by Flaminal® in the management of this complex patient and wound. Dressings which reduce bacteria in a wound such as Flaminal® will help to autolytically debride slough and promote healthy granulation without causing additional pain and trauma for the patient.

## References

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