

# TREATING MIXED AETIOLOGY LEG ULCERS USING A SILVER-IMPREGNATED DRESSING

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## PATIENT DETAILS AND HISTORY

An 87-year-old woman presented with ongoing unhealed ulceration of both legs. The ulcers, which were venous in origin, had been present since 1998.

Until March 2005 she had been treated in the community by district nurses. Her past medical history included atrial fibrillation and osteoarthritis. Her medication consisted of digoxin, aspirin, co-amilorfruse and paracetamol.

The patient presented to the vascular clinic with bilateral leg ulceration. The ulcers were superficial and in the gaiter area with some oedema. She complained of severe pain at dressing changes and at night when her legs were elevated,



Figure 1. Necrotic (black) and sloughy (yellow) tissue covers most of the wound bed.

and reported she was now unable to go to bed.

The ulcers were assessed following clinical guidelines from the Royal College of Nursing (RCN, 2006) that had been translated into an integrated care pathway for venous leg ulcers, as this was the trust's policy. A Doppler assessment was performed and showed an ankle brachial pressure index (ABPI) of 0.76 on the right leg and 0.78 on the left. This indicated that the ulcers

were now of mixed aetiology.

The wound bed had a variety of tissue types including necrotic and sloughy tissue. These tissue types are more easily identified when using a specified framework. The one used within the author's trust is the Wound Healing Continuum devised by Kingsley (2001)

which outlines tissue types as colours and is easily used across all disciplines. The dressing when removed was bright green indicating that the wound was infected with *Pseudomonas spp.* Using the criteria for wound infection (Harding and Cutting, 1994; Cutting and White, 2005) the ulcers displayed other clear signs of infection, such as wound breakdown, cellulitis, friable and bleeding granulation tissue and malodour. All



Figure 2. In addition to necrotic and sloughy tissue, the classic green colour of *Pseudomonas* infection can be seen.



Figure 3. Following nine days of treatment with Aquacel Ag, infection had reduced.

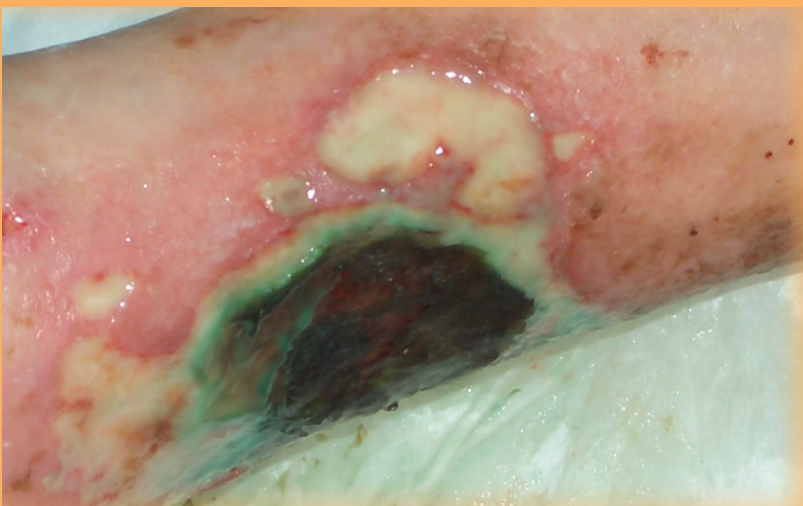


Figure 4. After nine days of treatment with Aquacel Ag, granulation (red) tissue can be seen on the wound bed.

of these signs are clearly demonstrated in *Figures 1* and *2*.

The patient was in so much pain it was almost impossible to change the dressing in the outpatient setting. It was decided by the tissue viability and vascular nurse specialist and the vascular surgeon to admit the patient to hospital for wound management, pain control and treatment of the infection.

## WOUND MANAGEMENT

A treatment regimen was devised that involved daily dressing changes:

- ▶▶ The patient's legs were gently washed with aqueous cream
- ▶▶ 50:50 white soft paraffin and liquid paraffin was applied to the surrounding skin as it was very dry
- ▶▶ A silver-impregnated hydrofibre dressing (Aquacel Ag; ConvaTec, Ickenham) was applied to all ulcerated areas
- ▶▶ Surgical pads (Zetuvit; Hartmann, Heywood) were applied for added absorbency
- ▶▶ An orthopaedic wool layer was applied from the toe to the knee, to provide further absorbency and protection
- ▶▶ A crepe bandage was then added from toe to knee as the patient could not tolerate reduced compression. The RCN recommend that compression in patients with mixed aetiology ulceration should be applied with caution and constant review.

Good skin care is an essential part of leg ulcer management as is the selection of an appropriate dressing. The silver-impregnated

hydrofibre dressing that was chosen for the patient not only provided antimicrobial activity to eliminate bacteria but also provided a high level of absorbency to deal with the increased levels of exudate. The nature of this dressing means that the fluid absorbed is held within the dressing confining it to the area above the wound thus limiting lateral wicking, controlling moisture and reducing the risk of maceration.

The dressing was changed daily while the infection was apparent and reduced later when there was a reduction in exudate.

### CONTROLLING PAIN AND INFECTION

Initially a referral to the pain team was made, as pain control was needed in order to undertake dressing changes effectively and ensure the patient was getting the rest she required to recuperate.

Gabapentin was given for the neuropathic pain; 100mg in the morning and 300mg at night. The higher dose helped the patient to sleep at night when her pain was severe. Oxycodone hydrochloride — an opioid analgesic similar to morphine — was prescribed in the slow release form oxycontin,

20mg twice a day, for dressing changes; 5mg of oxynorm (normal-release oxycodone) was also prescribed as this acts within 20 to 30 minutes of administration and helped take the edge off any pain experienced during dressing changes. Intravenous antibiotics — flucloxacillin and augmentin were also administered to deal with infection systemically.

The patient was nursed in bed and her legs were elevated, as her pain would allow. Her nutritional status was poor so a referral to the dietician was made and she was advised to have a high protein diet.

### OUTCOMES

Following a week of the above regimen, the wounds were visibly improved. The necrotic and sloughy tissue was debriding and the levels of exudate had reduced.

The dressing changes were less painful not only because of the balance of the analgesics but the dressings used were easy to remove and atraumatic to the fragile, friable tissue within the wound bed. *Figures 3 and 4* show the improvement in the wound bed and a reduction in the necrotic and sloughy tissue present.

### CONCLUSION

The use of a holistic approach and the multidisciplinary team when dealing with complex chronic leg ulcers is vital. The choice of appropriate dressings based on the wound assessment will enable issues at the wound bed to be controlled and patient comfort to be enhanced. Choosing the most appropriate dressing will aid the ongoing healing process and subsequently reduce the amount of time nurses spend on dressing changes.

The use of the silver-impregnated hydrofibre dressing addressed a variety of issues at the wound bed, including the management of exudate and provision of an antimicrobial action. It is a versatile dressing that can be used on all tissue types with good effects, as demonstrated in this particular case. **WE**

Cutting KF, Harding KG (1994) Criteria for identifying wound infection. *J Wound Care* **3(4)**: 198–201

Cutting KF, White RJ (2005) Criteria for identifying wound infection – revisited *Ostomy Wound Manage* **51(1)**: 28–34

Kingsley A (2001) A proactive approach to wound infection. *Nurs Standard* **15(30)**: 50–8

Royal College of Nursing Institute, University of York (2006) *Clinical Practice Guidelines: The Management of Patients with Venous Leg Ulcers*. RCN, London

## FREQUENTLY ASKED QUESTION

**Q** We have a large gentleman who has standard multilayer bandages. His venous leg ulcer continues to be very wet and we are having to change the bandages alternate days. Is there any reason for this?

**A** You need to check his ankle width and that the correct multilayer system has been chosen. If his ankle is greater than 25cm, he is simply not receiving enough compression therapy. His oedema will not be controlled and thus the exudate will continue.