

A superabsorbent wound dressing for the management of diabetic foot ulceration

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Diabetic foot problems cost the NHS an estimated £600 million per year, with foot problems being the most common cause of admission to hospital for people with diabetes (Gordois et al, 2003; Boulton et al, 2005). Every 30 seconds, somewhere in the world a limb is lost due to diabetes, equating to approximately 100 limbs a week in the UK — 85% of these diabetes-related amputations are preceded by foot ulceration (World Health Organization [WHO], 2005).

Best practice in wound care is therefore essential within the area of diabetic foot ulceration, with dressing choice playing an important role. The National Institute for Health and Clinical Excellence guidance recommends that healthcare professionals should use wound dressings that best match clinical experience, patient preference, the site of the wound, while also considering the cost of the dressing (NICE Guideline 10, 2004).

Curea P1 (Bullen Healthcare) is a sterile superabsorbent wound dressing, containing a cellulose composite, with fluid-retaining superabsorbent materials. It is indicated for use with chronic and highly exuding wounds.

Case report

The authors evaluated the effectiveness of Curea P1 in the case of Mr M, a 61-year-old male with poorly controlled type 2 diabetes. Following a holiday to Egypt, Mr M presented to the authors' clinic with bilateral neuroischaemic foot ulceration to the plantar surfaces



Figure 1. Initial presentation at clinic.

of his feet, caused by burning from poolside tiles (*Figure 1*).

The ulcerations to Mr M's right foot progressed to healing in six weeks without complications, following a management plan including systemic antibiotics, a primary antimicrobial dressing and pressure offloading.

The diabetic foot ulcerations to Mr M's left foot, however, further deteriorated. There was an increase in exudate level and malodour, despite oral antibiotic therapy (*Figure 2*). Although exudate is an essential component of the healing response in both acute and chronic wounds, it can present a clinical management problem and be a sign of local infection (Cutting and Harding, 1994; Gilchrist, 1999).

Clinical signs of osteomyelitis were present at this stage, with the ulcer probing to bone. Although X-ray at presentation had shown no evidence of osteomyelitis, after the patient was admitted as an inpatient for intravenous (IV) antibiotics, osteomyelitis was confirmed of the left 1st and 5th

metatarsal heads on repeat X-ray.

Wound exudate is composed of fluid from the leaking blood vessels, growth factors from cells in the wound environment, and debris from the damaged tissues (Vickery, 1997). Copious exudate can saturate the wound bed and periwound skin causing maceration which, in turn, can lead to enlargement of the wound (White, 2001).

Curea P1 was chosen by the authors following the increase in exudate levels to the left foot, as a secondary dressing in conjunction with a primary antimicrobial dressing (Medihoney™ Antibacterial Wound Gel™) for its following properties:

- Ability to absorb large quantities of exudate while maintaining a moist wound environment
- Ability to withstand pressure due to the site of the ulceration, as Curea P1 also absorbs on weightbearing, i.e. under the plantar surface of the foot
- No requirement for adhesives or bonding agents

