

A grade 4 pressure ulcer cared for in a nursing home

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Pressure ulcers are a major health problem causing a substantial amount of suffering which leads to a reduction in the quality of life for patients and their carers (Franks et al, 1999).

The clinical challenge

- ▶▶ Manage bioburden imbalance
- ▶▶ Debride slough and necrotic tissue
- ▶▶ Reduce pain at dressing change
- ▶▶ Manage exudate and odour.

Assessment of the patient and the wound

Mrs B is a 92-year-old woman being cared for in a nursing home. Her medical history included arterial insufficiency, urinary and faecal incontinence, and immobility.

Mrs B was referred to the Tissue Viability Nurse (TVN) for advice on the management of a grade 4 pressure ulcer of 4 months duration (Figure 1). The wound was situated in the ischial tuberosity region, and on initial assessment measured 6cm long x 4.5cm wide x 5cm deep. The wound bed presented with 90% slough and 10% necrotic tissue and was extremely malodorous, producing high levels of serosanguinous exudate. The surrounding skin was erythematous and the discoloured wound base indicated the presence of infection (Cutting and Harding, 1994). Dressing changes were painful for the patient.

Wound management

Mrs B commenced on flucloxacillin 500mg and metronidazole 400mg both three times daily to treat the presenting infection. The antibiotic regimen was followed for 7 days. A wound swab was sent to microbiology for culture and sensitivity to isolate the causative pathogen(s). The wound swab results identified *Bacteroides fragilis* (anaerobic bacteria) and *Staphylococcus aureus* (aerobic bacteria) which were sensitive to the prescribed antibiotics, so the regimen was continued.

The pressure ulcer cavity was lightly packed with a hydrofiber® dressing with ionic silver (Aquacel® Ag) in order to reduce the bacterial

burden at the wound base and manage exudate. Secondary dressings included a carbon alginate/hydrofiber® dressing (Carboflex®) for additional management of exudate and odour absorption, and an absorbent self-adhesive soft silicone dressing to secure and minimise trauma and pain during dressing removal. Daily dressing changes were required due to the high levels of exudate at this time.

Mrs B was initially nursed on an alternating overlay mattress, however; on assessment by the TVN she was found to be at high risk of further skin breakdown (Braden Scale 10; Braden and Bergstrom, 1994) therefore, the mattress was changed to an alternating full mattress replacement.

The outcome

Twenty six days later (Figure 2) with consistent use of the dressing regime, the wound measured 6cm long x 4cm wide x 4cm deep. The base of the wound now presented with approximately 98% healthy red granulation tissue and 2% sloughy tissue. The exudate levels remained high, however; odour was no longer a problem and surrounding tissue was normal in appearance. Mrs B did not appear to experience any pain during dressing changes while using this treatment regime. Dressing changes continued to be carried out daily, however; the Carboflex® dressing was no longer required as the odour had resolved. At 5 weeks there was a marked reduction in the size of the wound: 3cm long x 2cm wide x 2.5cm deep. Exudate level was now reduced, and the base of the wound was granulating and contracting. There remained a small amount of slough which was resolving slowly and the edges were epithelialising (Figure 3). Dressing changes were reduced to alternate days. At week 8 the wound was completely healed. After a further 3 months the scar had flattened and the skin appearance was returning to normal (Figure 4).

Discussion

This case study illustrates the challenges of nursing an elderly patient with a pressure ulcer in a nursing home. Selection of appropriate dressings was guided by an holistic assessment of the patient. Mrs B's treatment regime using a hydrofiber® dressing with ionic silver (Aquacel®



Figure 1. On assessment: pressure ulcer of 4 months duration.



Figure 2. Reassessment after 26 days.



Figure 3. Reassessment at 9 weeks.



Figure 4. Wound healed, scar flattened.

Ag) along with systemic antibiotics were successful in reducing the bacterial burden and enhancing wound healing.

By working in collaboration with the TVN, the nursing home staff achieved complete healing of a grade 4 pressure ulcer and greatly improved Mrs B's quality of life. **WUK**

Braden BJ, Bergstrom N (1994) Predictive validity of the Braden Scale for pressure sore risk in a nursing home population. *Research Nurs Health* **17**: 459-70

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

Franks PJ, Winterburg H, Moffatt C (1999) Quality of life in patients suffering from pressure ulceration: a case controlled study. *Ostomy and Wound Management* **45**: 56