Allevyn used to treat a pre-tibial trauma wound in an older person

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This case study follows the progress of a patient who suffered pre-tibial trauma when a clothes airer accidentally fell against her leg. The study will present how the wound responded to treatment with Allevyn (Smith & Nephew, Hull) adhesive dressing.

The patient was an 81-year-old woman who had enjoyed good health for most of her life. She lived in a semi-rural area where transport to her GP surgery was limited. She was referred by her GP to the district nurse for care of her wound because although she was not housebound she was the main carer for her husband who had Alzheimer's disease and there was a worry that she would neglect her own healthcare.

The pre-tibial region is a common site for soft-tissue injury in older people and these injuries are most commonly seen in women aged more than 60 years (Dunken et al, 2003). These wounds are notoriously slow to heal, which may be because the ageing process is often most apparent in changes to the skin, such as thinning, a loss of elasticity due to collagen depletion and a reduction in the blood and nerve supply (Timmons, 2003). These changes can have a massive impact on wound healing (Ford and Willis, 2002).

It is advantageous to adopt an approach to the delivery of nursing care which recognises explicitly the uniqueness of the individual. The use of a formalised framework to guide practice is valuable in that it presents a systematic prescription for action and encompasses a sound theoretical base (Alabaster, 2000). A full holistic assessment was carried out using Orem's model of self care (Orem, 1985). In Orem's model the importance of the role of the patient in the planning of nursing interventions is considered essential (Alabaster, 2000). The assessment identified a history of essential hypertension and irritable bowel syndrome. She had no known allergies and the only medication she took was mebeverine hydrochloride for irritable bowel and lercandipine hydrochloride for hypertension, neither of which are known to affect the wound healing process (British National Formulary, 2006). Initial wound assessment using the Leicester Primary Care Trust's wound assessment tool revealed a superficial wound that was leaking serous fluid. The wound was about 2cm in diameter with the wound bed consisted of 25% slough and 75% granulation tissue (*Figure 1*).

The patient complained of pain at the wound site as 4 using a pain scale of 0–10 (0 being no pain, and 10 being the worst pain). Care of the wound was complicated by the fragile, tissue paper skin surrounding the wound which often limits the type of dressing which can be used. The patient's pain on removal of Allevyn adhesive dressing was described as 2 which was improved by moistening the adhesive edges. The National Institute for Clinical Excellence guidelines (NICE, 2001) highlight the need for dressings that are acceptable to the patient with regard to pain-free dressing changes, comfort and trauma-free removal. The patient requested that she have a dressing that would enable her to have her daily shower, and she was reluctant to have any dressing that involved bandaging as she wanted to wear her normal footwear.

In the past a non-adherent dressing would have been used and secured with a light bandage which would most likely have required daily dressing changes. The reason for this choice would have been based on the problems related to skin stripping that accompanies the application and reapplication of adhesive products (Dykes, 2007). However, these dressings had a tendency to dry out causing trauma on removal which subsequently damaged the wound bed. There was also the increased

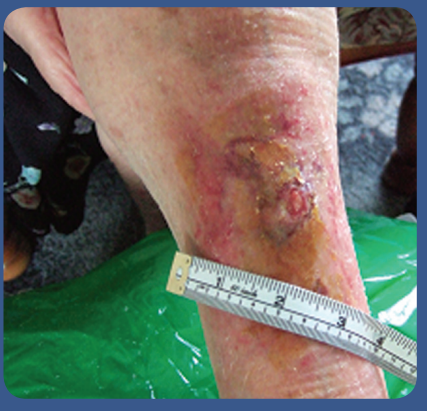

Figure 1. Pre-tibial wound at initial assessment.

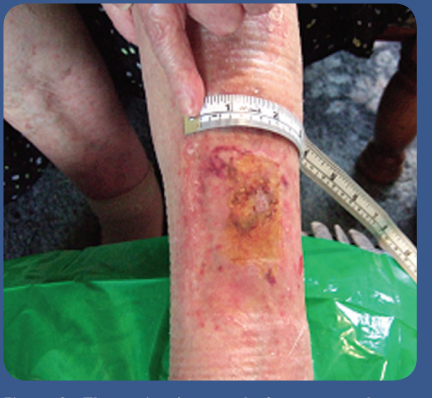

Figure 2. The patient's wound after one week of treatment.

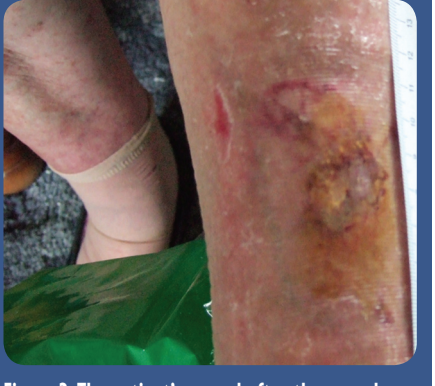

Figure 3. The patient's wound after three weeks of treatment.

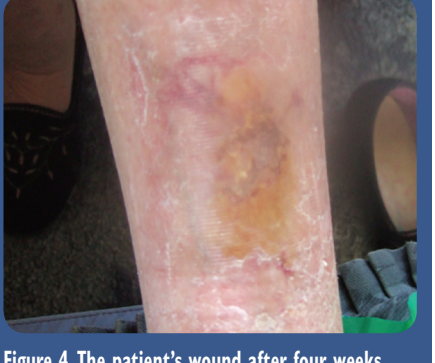

Figure 4. The patient's wound after four weeks of treatment.

risk of maceration in wounds with higher levels of exudate.

An adhesive dressing would not usually be indicated for a wound with such vulnerable surrounding skin. However, the new Allevyn adhesive was considered because it had been used successfully by colleagues on similar wounds such as blisters, basal cell carcinomas, pressure ulcers and dehisced abdominal wounds. Allevyn is a range of moist wound healing dressings designed specifically for the management of chronic and exuding wounds and it caters for all wound shapes and sites and levels of exudate. Allevyn absorbs exudate laterally, protecting the surrounding skin. It is also conformable, allows the patient to shower and requires minimal dressing changes. The new Allevyn dressings are comprised of an advanced triple-layered construction resulting in improved breathability and faster fluid uptake with a fluid-handling capacity which is up to three times greater than before. The new improved low allergy water-based adhesive and the enhanced construction influenced the decision to use Allevyn for this particular patient.

When considering the acquisition cost of dressing products it must be remembered that a dressing that is considered expensive per unit may incur less cost than a cheaper one when the cost of the complete episode of care is taken into account (Jones and Miguel, 2006). Controlled fluid management can help reduce costs through fewer dressing changes and less disruption to the wound environment and to the patient, resulting in faster healing. The price of products used in the treatment process is a relatively minor part of the overall cost — in most cases, the dominant element is the cost of nurse time (Postnett, 2006).

In this case, the dressing was initially changed twice a week reducing to a weekly change after only two weeks. Total healing was just over four weeks. Any decrease in the healing time of a wound is likely to promote both social and economic advantages for the patient by ensuring a shorter duration of pain and discomfort, as well as early mobilisation and return to normal life.

Photographs were taken to monitor wound progression. Parameters that were recorded and monitored included:

- Wound pain during wear
- Pain on removal of dressing
- Ease of removal
- Changes in peri-wound skin, for example inflammation, maceration, whether it was dry or flaky
- Level of exudate
- Status of the wound bed and wound size.

There was not much change during the first week of treatment (*Figure 2*) but the bruising to surrounding skin was now more clearly noticeable. After only two weeks, wound pain during wear was reduced to a rating of one on the pain scale and there was no pain on removal. Exudate was reducing, surrounding skin was improving and therefore dressing changes were reduced to weekly (*Figure 3*).

After three weeks, exudate production was now only slight, and pain during wear and dressing removal was 0. There was no change in the condition of the surrounding skin. After four weeks the wound had healed, without complication (*Figure 4*).

The patient was elated by the speed at which her wound had healed. She was happy that having this wound had not affected her quality of life as she had been able to continue to have her daily shower. The dressing choice had proved to be suitable for this type of wound and helped her to regain a better quality of life. The surrounding skin had been left completely unaffected by the adhesive dressing.

In conclusion, this case study has presented a patient who suffered a pre-tibial laceration to her lower limb, a common site for soft-tissue injury in older people, but most commonly seen in women. The priority for the patient was a dressing which would allow her to take her daily shower. The challenge for the nurse was to select a dressing which would maintain the wound interface, be a barrier to infection, be cost-effective and be comfortable with no incidents of pain or trauma on removal. After only four weeks of treatment with new Allevyn Adhesive the wound was totally healed. The initial pain improved during the first week, and pain on removal was minimised by following the manufacturer's instructions and moistening the adhesive edges when removing the dressing. The wound did not affect the patient's mobility or social life and she was able to maintain her normal function as before. **WUK**

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