The use of Allevyn® Ag in chronic and acute wounds: case report series
INTRODUCTION

The use of silver dressings, both in the UK and globally, has attracted interest in recent years (Carter et al, 2010; Fife et al, 2010; Storm-Versloot et al, 2010; Best Practice Statement, 2011; Newton, 2011). Despite having been used for millennia, a few recent publications have caught the interest of those with an eye to budget management (Michaels et al, 2009; Drugs and Therapeutic Bulletin [DTB], 2010). The suggestion has been made that there is no evidence to support the use of such products (DTB, 2010; Toy and Macera, 2011), and certain authorities have seen fit to remove silver dressings from their formularies (White and Kingsley, 2010). This has led to ongoing debate regarding silver dressing use (White, 2011), and prompted a group of expert clinicians to produce a Best Practice Statement on the use of topical antimicrobial/antiseptic agents in wound management (BPS, 2011) that provides clear guidance as to the duration, assessment and referral process in this area of wound care.

The case reports in this document were conducted in line with the principles of best practice and demonstrate how silver dressings can be effectively used to manage both infection/symptoms and to promote healing in a varied group of patients. When wound healing is the desired outcome, it is achieved through various stages. Initially, bacterial load and excessive exudate may require treating to facilitate healing. The ability to reduce bacteria and, thus, malodour and excessive exudate can also have an impact on patient quality of life (Newton, 2010). In this case report series, Allevyn® AG (Smith & Nephew) has been used in different formats. In each case, the principles of the Best Practice Statement were used to guide decision-making, with the product being used to absorb exudate and reduce bacterial bioburden. In some cases, the product was used until complete healing was achieved. This could be in a short time-frame, such as in cases 1, 2, 4, 5 and 9. In other cases, such as 7, 8 and 10, the product was used to manage symptoms such as malodour for a short period. When this was achieved, the patient moved on to other more suitable treatment options. There are often many choices available for the practitioner to achieve their goal, and no one product is suitable for every circumstance.

The cases presented here demonstrate how Allevyn AG, in different formats, has been used successfully to treat patients with clinical indications of an altered bacterial state which, in line with the best practice statement, justified the use of an antiseptic dressing as part of their management plan. These cases provide the practitioner with an insight into how these products can be used successfully as part of a structured management plan and are not an endorsement of the products.

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June, 2011

References

A 35-year-old female presented with a two-week-old untreated burn to her arm. Although the burn was superficial in nature, it had gradually deteriorated and signs of local infection, including a small amount of purulent exudate, pain, oedema and heat, were noted on examination (Figure 1).

The wound measured 6x3cm at its widest points and consisted of 100% granulation tissue. Cellulitis and erythema of the surrounding skin were present, of which the latter was described by the patient as gradually worsening.

The aims of wound management were to treat local infection and promote healing. Allevyn® Ag Adhesive (Smith & Nephew), which has a sustained release of antimicrobial silver was selected as the dressing of choice. It was applied to the wound and changed every third day.

As the images show, over a seven-day period the wound re-epithelialised and signs of infection subsided (Figure 2). The patient was happy with the outcome of her treatment, particularly the reduction in pain experienced, and the wear time of the dressing.

Figure 1. At presentation, the wound was small and surrounded by cellulitis and oedema.

Figure 2. After seven days of treatment with Allevyn Ag Adhesive, the wound site was no longer cellultic, no exudate was present and the wound had almost healed.
A 57-year-old female presented with severe blistering to her left foot and ankle area caused by extravasation of intravenous fluids (Figure 1). The wounds had been present for five days and were left exposed to the air. However, the wounds were beginning to show signs of infection, including erythema, pain, seropurulent exudate and local oedema.

On initial examination, the blister on the forefoot measured 10x15cm, with the blister on the gaiter area measuring 10x7cm. Both were surrounded by a large area of erythema. The blisters were popped before dressing, but were not totally deroofed.

Allevyn Ag Gentle Border was chosen to manage the wounds to treat the suspected local infection and promote healing, while avoiding further trauma to the surrounding fragile skin.

Three Allevyn Ag Gentle Border 12.5x12.5cm dressings were applied to the wounds and changed every three days (Figure 2).

By day 4 of treatment, the blistered area had re-epithelialised, the erythema had subsided and the surrounding skin had returned to normal (Figure 3). The patient reported a reduction in wound pain experienced, and felt that the dressing was comfortable, both to wear and at dressing changes.

As the wound was considered to be on a healing trajectory, the patient was discharged from the care of the tissue viability department.
An 86-year-old female with a history of peripheral vascular disease presented with a pre-tibial laceration caused by trauma. The wound had been present for two weeks, during which time Silvercel® (Systagenix) and Mepilex® Border (Mölnlycke Healthcare, Dunstable) were used to treat the wound. However, the wound had failed to progress and so the dressing regimen was reassessed.

At presentation, the wound measured 2.5x1.5cm, extended through the dermis and was producing a moderate amount of exudate. The patient’s leg was oedematous and there was obvious cellulitis in the surrounding skin (Figure 1).

Despite the small dimensions, wounds such as this can become quickly infected in patients at risk and lead to spreading infection. Management of infection was, therefore, of upmost importance in this patient. The main aims of treatment were to manage the wound bioburden and absorb the exudate in order to promote healing. Allevyn Ag Non Adhesive was considered appropriate to fulfill these criteria, and thus was applied, with three-daily dressing changes.

After 21 days of treatment, the wound had reduced in size and the oedema and inflammation in the limb had also diminished (Figure 2). By day 31, no signs of infection were present and the wound had almost completely re-epithelialised, despite the skin being pale and mottled, indicating poor vascular supply (Figure 3).

Wounds which have a high bioburden in patients with low/poor host resistance may experience delayed healing. However, in this patient, Allevyn Ag Non Adhesive helped to reduce the bioburden to allow normal healing to take place.
A female patient weighing 36 stone presented with five ulcers to the back of her left leg (Figure 1). The weight of the limb and the moisture present had contributed to their formation. The ulcers were of two weeks’ duration, during which time they had been treated with simple foam dressings.

On examination, most of the ulcers were covered with sloughy tissue and were producing moderate amounts of seropurulent exudate. The peri-wound area showed signs of maceration, irritation and erythema.

The quantity and viscosity of the exudate, along with the presence of erythema indicated a risk of increasing infection. Thus, Allevyn Ag Gentle Border was applied to the wounds and dressings were changed every three days. Over a period of 12 days, the ulcers healed and there was no further damage to the peri-wound skin (Figure 2). Emollients were then applied to improve the skin’s condition, and the patient was discharged from the care of the tissue viability department.
A 97-year-old male with a necrotic heel pressure ulcer (Figure 1) was treated with Versajet® (Smith & Nephew) hydrosurgery to remove the necrotic tissue.

Following hydrosurgery, the wound was reduced to 100% granulation tissue, and silver nitrate sticks were used to cauterise the bleeding points (Figure 2).

Topical negative pressure (TNP) therapy was applied to the wound for two weeks, during which time it reduced greatly in size. A foam dressing was then applied to the wound, however, over a two-week period the wound began to show signs of deterioration and possible critical colonisation. The level of exudate increased, possibly due to an increase in the wound bioburden. As a result, the surrounding skin became macerated, the wound stopped healing and the granulation tissue which formed was of poor quality (Figure 3).

The key aims of treatment were to reduce the wound bioburden and absorb exudate in order to heal the wound and reduce the maceration of the surrounding skin.

Allevyn Ag Adhesive was applied to the wound and changed every third day. The dressing was comfortable for the patient and did not result in damage to the surrounding skin on removal. Following 14 days of treatment with Allevyn Ag Adhesive, the macerated tissue lifted off, meaning that the wound was now bigger in area, but consisted of healthy granulation tissue (Figure 4). The wound then progressed along the normal healing trajectory, with the wound edges contracting (Figure 5), and new epithelial growth further reducing the wound in size. By day 31 of treatment the wound had almost completely healed with no signs of infection (Figure 6), and by day 37 of treatment with Allevyn Ag Adhesive the wound had healed (Figure 7). This case demonstrates an excellent result in a patient who is elderly and, therefore, at an increased risk of infection.
Figure 4. Following 14 days of treatment with Allevyn Ag Adhesive, the wound showed signs of granulation, the wound edge was no longer macerated, and there was a reduction in the volume of exudate.

Figure 5. The wound returned to a normal healing trajectory and began to contract in size.

Figure 6. The wound showing contraction and re-epithelialisation.

Figure 7. Following 37 days of Allevyn Ag Adhesive treatment the wound had completely healed.
Introduction
In this case, an 84-year-old man with lymphoma presented with a dehisced biopsy incision wound (Figure 1). On initial examination the wound was found to be swollen with a covering of slough across the wound bed and was painful to touch. The wound measured approximately 2.5x3.0cm. The patient was seen on the first day of his chemotherapy regimen.

Treatment objectives
The treatment objectives were as follows:
- Removal of slough
- Absorption of exudate
- Prevention of infection in high-risk patient.

Treatment plan
The treatment plan comprised the following actions:
- Application of IntraSite® Gel (Smith & Nephew) to the surface of the wound
- Use of Allevyn® Ag Gentle Border dressing (Smith & Nephew)
- Dressings to be changed every 2–3 days as required.

Evaluation
Figure 2 shows the wound after four weeks of chemotherapy and wound treatment. The dressing changes were performed in the patient’s home and there were no incidents of infection. The treatment objectives were met and there was no periwound disruption noted. The wound progressed to healing without incident.
Introduction
An 82-year-old woman presented with a sacral grade 3 ulcer, with a recent history of malodour, increasing levels of exudate and pain from the wound. Before initial assessment by the tissue viability team (Figure 1), the wound had been treated with Granuflex® Bordered Sacral (ConvaTec). The wound was treated for 10 days using Allevyn Ag Gentle Border sacral dressing as part of an overall pressure ulcer management plan. After the 10 days the wound had no malodour or pain, and the exudate had been contained within the dressing with no maceration or periwound damage (Figure 2).

Treatment with the silver dressing was discontinued as the initial symptoms had resolved during the 10-day treatment period and a different approach was now required.
This 90-year-old man, in poor health status secondary to a chronic haematology condition, was admitted with a sacral pressure ulcer. He had previously been a patient of the tissue viability department and had initially presented with an extensive grade 4 pressure ulcer, with an undermined area measuring 30x24cm. The wound had been debrided and the patient treated with intravenous (IV) antibiotics and negative pressure wound therapy. On discharge his wound had been granulating well and was managed with foam dressings. However, at initial review (Figure 1), the wound was found to be malodorous, sloughy with a high volume of exudate and macerated wound margins. The patient was treated with Allevyn Ag Gentle Border sacral dressing as part of an overall pressure ulcer management plan.

After 14 days of treatment, it was decided by the tissue viability team to continue with the current regimen, as while the symptoms had improved they had not been eradicated. After 21 days the decision was taken to stop the treatment, as malodour and the level of exudate had reduced and it was felt that the patient could be returned to a non-silver foam dressing regimen (Figure 2).
A 75-year-old male presented with a recent history of cellulitis to the left lower limb, which resulted in the formation of pus-filled blisters, which were deroofed to reveal superficial ulceration to the ankle area (Figure 1). The patient was treated with intravenous (IV) antibiotics and Allevyn AG Non Adhesive was applied to the wound to prevent re-infection. The limb was managed using toe-to-knee yellow line Comfifast™ (Synergy Healthcare), SoffBan® (Smith and Nephew) and another layer of yellow line Comfifast to help reduce the soft pitting oedema in the limb. After 10 days of treatment, the wound was reviewed and found to be healed (Figure 2).
In this case, Allevyn AG Non Adhesive was used to reduce the bacterial load in a wound bed which had been debrided of slough and debris from previous dressings on admission by the tissue viability team. Due to the bacterial load and the presence of lower limb oedema the level of exudate was high (Figure 1).

It was decided by the tissue viability team to try and improve the condition of the wound before undertaking ankle brachial pressure index (ABPI) assessment and starting compression therapy if appropriate. After eight days of treatment the wound bed had improved, with a reduction in malodour. At this point, the greatest clinical challenge was the presence of lower limb oedema, in particular to the foot area. Treatment using the silver dressing was stopped and after a successful ABPI assessment, the patient was started on Actico® short-stretch bandaging (Activa Healthcare) to help reduce the oedema.

Figure 1. Leg ulcer after debridement, with a high level of exudate and malodour.

Figure 2. After one week of treatment with Allevyn AG Non Adhesive the wound bed had improved.
Manages exudate, fights infection.
Two jobs, one dressing.

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Manages exudate, fights infection.
Two jobs, one dressing.

ALLEVYN Ag is designed to absorb, retain and transpire the optimal balance of fluid¹ and to release silver (Ag) to provide sustained antimicrobial activity.²

For patients. For budgets. For today.³

References

²Smith & Nephew Wound Management Laboratory Report Ref: DS/08/0701R1, Silver Release of ALLEVYN Ag Gentle, ALLEVYN Ag Gentle Border, ALLEVYN Ag Non-Adhesive and ALLEVYN Ag Adhesive, Carpenter S., September 2008.