A modern dressing range to meet today’s wound care challenges

Lisa Sutherland

With more and more advanced wound dressings becoming available, clinicians need to be selective when choosing the most appropriate treatment for patients with wounds in the community. Dressings are no longer tasked simply with protecting wounds and offering some level of absorbcency, but need to be able to address both the physical and psychological aspects of having a wound to ensure patient-centred care. The sorbion range of dressings are developed to offer clinical solutions and provide cost-effective care.

KEYWORDS:
Exudate management ■ Wound bed preparation ■ sorbion range

While dressings cannot heal wounds, they play a vital role in preparing the wound bed for healing and helping to keep patients comfortable throughout the process. In recent years, the introduction of advanced wound dressings has contributed to improving quality of life, and ensuring cost-effective care. These dressings employ their own individual means of handling exudate, with some having improved levels of performance, as a result of their design and material characteristics, other than just simple absorption (Cutting, 2008).

Although the principles of the TIME tool and wound bed preparation are still seen as the cornerstone of optimum wound management (Leaper et al, 2012), wound care products have evolved to follow advances in science and technology (Cutting et al, 2013). For example, there are now more dressings available that are composed of superabsorbent polymers (SAPs) which both absorb and retain wound fluid by turning it into a gel that is locked away within their inner core.

A wound needs the appropriate moisture to heal, as per the TIME concept. Too much exudate can lead to problems such as maceration of the surrounding skin, increased risk of infection, and delayed wound closure — all of which increase costs in terms of dressings and nursing time.

Methods to create an optimum moist wound environment vary, but they rely on the clinician choosing appropriate dressings at each stage of the healing process. Absorption is not the only parameter to consider, the dressing’s ability to retain fluid in its core and thereby stop the wound becoming too dry and/or macerated is also important (Thomas, 2008) — particularly for patients being treated with compression therapy (Cutting, 2012).

Patients’ anxiety around leakage is also a factor (Chadwick, 2008). Patient wellbeing is taking more prominence today and the stress that having a wound can cause has been acknowledged. Coping with exudate and odour is seen as a daily challenge for patients with leg ulcers, leading to associated feelings of shame and embarrassment, which can have a huge impact on social life (Green et al, 2013).

Thus, no longer is it enough for a dressing simply to protect, absorb and promote wound healing as other, more patient-centred aspects, have come into play, such as pain management, improving patient comfort and promoting wellbeing (Cutting, 2010).

SORBION RANGE AND HYDRATION RESPONSE TECHNOLOGY® (HRT)

The sorbion range of dressings (H&R Healthcare; Table 1) have been developed as intelligent dressings. The technology behind the dressings lies in the inner absorbent core based on Hydration Response Technology® (HRT). This technology was specifically designed to enable wound fluid to be quickly absorbed through its osmotic pull, but without drying out the wound (Sharp, 2010).

HRT consists of mechanically modified cellulose fibres and selected gelling agents, based on sodium acrylate polymers. It is the interaction of these two active components, which are contained within an outer hypoallergenic polypropylene cover, that enables the dressings to:

- Remove high volumes of exudate
- Provide a moist wound healing environment
- Bind and lock in fluid and bacteria within the dressings.

Holding bacteria within the inner core of the dressing both reduces the risk of cross-contamination (Evans, 2010) and re-contamination of the wound bed without having to introduce an antimicrobial agent, which might lead to antimicrobial resistance and increased costs.

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(Westgate and Cutting, 2012). There is also the added advantage that this reduces odour and prevents maceration and excoriation of the surrounding skin — vital aspects of optimum wound care (World Union of Wound Healing Societies [WUWHS], 2007).

As well as providing effective exudate management, the sorbion range of dressings have also been shown to offer soft debridement (Cutting, 2009).

Debridement plays an important part in wound bed preparation (Falabella, 2006). Cleansing the wound of debris and devitalised tissue allows the clinician to see more clearly how the wound is progressing, which helps when assessing and reassessing the wound. HRT has been recognised as facilitating autolytic (soft) debridement and reducing sloughy tissue (Cutting, 2009).

Cost-effectiveness is a key consideration in dressing choice. The six-monthly NHS cost of managing a VLU with sorbion sachet has been shown to be 15–28% lower than the costs of managing patients with three other superabsorbent dressings (Drymax® EXTRA, Flivasorb®, KerraMax®), when total care costs are taken into account. If only the cost of the dressing is considered, the saving to the NHS is between 14% and 52% due to the reduced number of dressings required (Panca et al, 2013).

To embrace the government’s programme of patient-centred care (NHS Institute for Innovation and Improvement), clinicians need to have a choice of dressings in different shapes and sizes to best meet patient needs. The sorbion range of dressings has expanded to include both non-adhesive and adhesive dressings in various shapes and sizes, as well as offering them in smaller pack sizes to reduce wastage (Table 1).

Particular developments have been made to improve further the absorbency capacity of the core in sorbion sachet EXTRA, while retaining all its HRT properties. The manufacturers have also committed themselves to reducing the cost of sorbion sana by improving the production process. The product components and product benefits remain the same, although the appearance of sorbion sana gentle is slightly different.

Creating an optimum wound environment through choosing an appropriate dressing at each stage of the healing process can be complex. The development of sorbion sana gentle, which incorporates the advantages of HRT technology and a 3D wound contact layer, has resulted in a hypoallergenic primary dressing which can be used for up to seven days, under compression, for low to highly exuding wounds across all stages of healing. The longer wear time helps to limit disruption to the wound, and promotes patient comfort.

The following case reports illustrate how sorbion can help to improve patient comfort and reduce the frequency of dressing changes in the community.

### CASE REPORT ONE

Mrs H was referred by the dermatology consultant to the tissue viability team for input into two non-healing leg ulcers following a steroid cream trial.

She was a 77-year-old lady with very mild dementia, a slight tremor to her left hand and mild renal impairment. She lived alone at home, but has care once a day to help with washing and dressing. Her daughter does her shopping, but otherwise she mobilises and lives independently. She had an ulcer to her left lower shin that measured 4.5x1.5cm and which had in the words of her daughter ‘crusted and scabbled over, though healed by the community teams on several occasions, but when the scab was removed there was still a wound underneath covered in slough’.

This wound originated following a traumatic injury at home. The community team had tried various dressings but had failed to heal it in over 12 months.

Mrs H had a further traumatic injury to her right shin, of over nine months’ duration, that measured 8x5cm, for which she had been referred to the local dermatology department for input. They thought the ulcers to be inflammatory, as Mrs H had raised inflammatory markers in her blood tests, and suggested a topical steroid cream. This reduced the inflammatory response, but failed to stimulate any granulation tissue or healing after three weeks of use. Mrs H was thus referred to the tissue viability nurses and the vascular team in May 2013.

She was seen by the vascular team who carried out a Doppler ultrasound which indicated an ankle brachial pressure index (ABPI) of over 0.8, indicative of being suitable for compression therapy (Vowden, 2012). A Duplex scan also showed venous reflux to the left leg but the right leg had normal function. Due to the painful nature of the ulcers,

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<tr>
<th>Table 1: sorbion range of dressings</th>
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<tbody>
<tr>
<td>Dressing</td>
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<tr>
<td>sorbion sana gentle</td>
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<tr>
<td>sorbion sachet EXTRA</td>
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<td>sorbion sachet multi star</td>
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At these prices why use anything else?

sorbion sana gentle
Atraumatic Wound Healing

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- Optimum fluid management - suitable for low to highly exuding wounds
- Tissue protection - minimises pain and trauma
- Hypoallergenic - ideal for sensitive skin
- Highly cost effective

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the vascular team did not apply compression and arranged a review after conventional treatment with dressings by the tissue viability team for three months.

Mrs H described the wounds and pain as ‘drawing sensations creeping up the leg’.

When Mrs H was seen by the tissue viability nurses as an outpatient on 13 May 2013, her dressings were being changed every other day by the community nurses. Both ulcers were shallow and ‘superficial’ in nature, but extremely painful and covered in 100% soft yellow slough (Figures 1 and 2).

The tissue viability nurses evaluated the use of alginate-based ointments with antimicrobial properties to remove the slough and reduce any possible biofilms for four weeks. Mrs H could only tolerate very simple dressings, as adherence was an issue due to her fragile skin. The wounds had quite high volumes of exudate necessitating alternate day dressing changes to manage the wound fluid and prevent maceration (Cook and Baker, 2012).

The wounds were reassessed after four weeks and showed only a slight reduction in slough with a few small areas of granulation tissue evident through the slough. At this point, the tissue viability team decided to use sorbion sana as a primary dressing. Mrs H had recently suffered further skin trauma on more than one dressing change and so it was hoped that by changing to sorbion sana this would reduce the frequency of dressing changes and manage the volume of exudate being produced.

Sorbion sana was applied on 17 June 2013. At review one week later, sloughy tissue had reduced by 50%, and there was 50% active granulation tissue present in both wounds (Figures 3 and 4). Mrs H could still not tolerate compression to her left leg, so sorbion sana was continued as the primary dressing. Due to a significant reduction in exudate volume, dressings changes were reduced to twice-weekly.

A review on 26 July 2013 revealed that the wounds were completely clean and granulating. The wound on the left leg had reduced in size to 4x1cm and the one on the right leg to 6.5x3cm. The pain Mrs H had been experiencing had also lessened at dressing changes, and both Mrs H and her family were pleased to see how quickly the wounds were improving. After discussion with Mrs H, the tissue viability team decided that the community nurses could reduce dressing changes to once-weekly.

The wounds continued to improve. By 26 September 2013, the ulcer to the left leg had completely healed and the one to the right leg had reduced to 90% of its original size.

A final review on 7 October 2013 resulted in the patient being fully healed and discharged from both the tissue viability nurses and the community nurses.

Mrs H’s daughter expressed how surprised she was at the speed of healing with the sorbion sana dressing, compared with the treatment over the previous 12 months of non-healing activity with other products.

CASE REPORT TWO

Mr N is a 54-year-old man who works full-time in an occupation which involves standing all day. He was referred to the tissue viability nurses from the emergency department after presenting for a second time in two months with an episode of cellulitis to his leg as a result of an ulcer.

Mr N’s past medical history included an operation to remove a pituitary tumour, as a result of which he was taking oral thyroxine and hydrocortisone, and saphenopopliteal surgery to his left leg for varicose veins. Mr N stated that the ulcer had ‘just occurred and failed to heal’ for nearly nine months, despite regular dressing changes with the practice nurse.
Extra protection for all your wet conditions
Mr N was seen by the tissue viability nurses on 22 October 2012. On examination, Mr N had an ulcer to the inner malleolus measuring 3x4cm. Mr N’s ABPI was checked with a Doppler ultrasound and showed readings over 0.8 indicating that compression bandages were safe to apply at 40mmHg (Scottish Intercollegiate Guidelines Network [SIGN], 2010).

The tissue viability nurses initially applied antimicrobial-based dressings, as the wound was sloughy and the history suggested a biofilm may be present due to the static nature of the wound (Thomson, 2011), with sorbion sachet EXTRA on top to manage the high volumes of exudate being produced by the ulcer. Full compression bandaging was also applied to reduce the effects of venous reflux.

Over a period of six months the wound steadily improved and reduced in size to 2x1.7cm. However, the ulcer then failed to move forward, with exudate volume remaining high and the wound becoming sloughy again, despite the use of different dressings, including antimicrobial, honey, inadine-based dressings, and alginites with continued use of compression therapy. At this stage, the tissue viability team decided to use sorbion sana, as Mrs H’s wounds (case report one) had responded well to this dressing. This new regimen was started on 5 September 2013.

Although the dressing has only been in use for four weeks, the wound has improved. There is no sloughy tissue present and epithelial activity can be seen at the wound edges, which has not been evident for several months. Exudate volume has also reduced, and dressing changes have been reduced to once per week under full compression.

CONCLUSION

Effective exudate management is dependent on choosing a dressing that can both absorb and retain the volume being produced (Chadwick, 2008; Evans, 2010) without drying out the wound bed, as well as offering continuous debridement (Riepe, 2011). If the length of time between dressing changes is extended, this will help to leave the wound undisturbed for longer, which contributes to keeping periwound skin in tact.

HRT has been developed and incorporated into a range of primary dressings which have an osmotic pull, but also create a moist wound environment (Evans, 2010) and provide clinicians with a resource that is easy to use, while:

- Absorbing wound fluid
- Retaining wound fluid
- Preventing maceration
- Managing bioburden
- Debriding.

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