The importance of effective exudate management in the community

Maureen Benbow

Excessive exudate production interferes with wound healing and has a detrimental effect on patients’ quality of life. Exudate management is crucial as wounds need an optimum level of moisture so that they can heal. Superabsorbent dressings can handle extreme levels of exudate, prevent leakage and reduce the frequency of dressing changes, allowing people to live a more normal life unhindered by saturated dressings that constantly need to be changed. Community nurses will often need to treat chronic wounds and may consider using superabsorbent dressings. This article takes a look at Zetuvit® Plus (HARTMANN), a superabsorbent dressing that is used for superficial, heavily exuding acute or chronic wounds with the author examining its potential role as a wound care option in the community.

KEYWORDS:
- Wound care
- Exudate
- Superabsorbent
- Community nursing

The production of wound exudate is an essential part of the healing process and it happens throughout all the stages of wound healing. In the initial inflammatory stage, neutrophils migrate to the wound site in response to injury and send cytokine messengers that trigger blood vessels to become more porous, leaking protein-rich exudate into the wound. In a wound that is following an unhindered healing trajectory, levels of exudate will gradually reduce as the wound progresses through the phases of wound healing.

WHAT IS EXUDATE?

Wound exudate consists of electrolytes, nutrients, proteins, neutrophils, platelets, white blood cells, growth factors, inflammatory mediators, waste products, matrix metalloproteins and other protein-digesting enzymes (World Union of Wound Healing Societies [WUWHS], 2007). It transports nutrients to the cells and stops the wound bed drying out.

In acute wounds, the exudate will wash over the wound and help to remove debris, assisting with autolysis and helping to repair damaged tissue. Acute wound exudate contains endogenous proteases that help the wound to close and the cells to grow (Benbow and Stevens, 2010).

In chronic wounds — those that have not healed within six weeks — the wound becomes stuck in the inflammatory stage, the exudate levels often become higher and the components of the exudate can contribute to the destruction of the extracellular matrix (ECM) (Widgerow, 2012).

Chronic wound exudate differs from acute wound fluid. It does not have the active growth factors that are found in acute wound exudate and has been described as a ‘wounding agent’ in its own right because it can slow down healing and damage the wound bed (Chen et al, 1992).

Excessive levels of wound exudate not only hinder the progression of wound healing, they can also damage the periwound skin, causing maceration and allowing the wound edges to widen. Excessive levels of wound exudate can also have a hugely detrimental psychological effect and can severely diminish quality of life. The associated malodour and practical problems such as leaking onto clothing can

While exudate creates the moist wound environment that is essential if wounds are to heal in a timely fashion, balanced moisture levels must be maintained — low levels of exudate can have a similarly detrimental effect on wound healing as excessive exudate. If the wound is too dry, moisture-donating dressings can be used to correct the balance whereas wounds producing excessive exudate levels require an absorbent dressing. Care must also be taken to protect the periwound skin.

WHY EXUDATE MANAGEMENT IS CRUCIAL IN THE COMMUNITY

The numbers of patients presenting with highly exuding wounds in the lower leg has been increasing in the past few decades, mainly because people are staying alive longer with chronic illness and comorbidities (Leon, 2011).

There has been a link made between an increase in people with oedema in the lower limbs and the increase in the number of people living longer after having conditions such as cardiac failure (Partsch, 2003). This has meant that a lot of patients present with complex wounds that require advanced wound care to manage the symptoms.

As mentioned above, the main aim of exudate management is to ensure a balance between too much and too little, as both over- and under-production can adversely affect wound healing. The appropriate choice of dressings is crucial and this can be achieved by regular wound assessment and careful selection of a dressing that can meet the patient’s needs (White and Cutting, 2006).

It is important that the choice of wound dressing is able to effectively manage the wound’s exudate levels in between dressing changes, which, for some people will mean between visits from their community nurse or visits to their GP. If a dressing leaks in between scheduled changes, it might indicate a need to use a more absorbent dressing.

It is estimated that 70% of wound care is carried out in the community (Drew et al, 2007) and community nurses will often need to address the issue of excessive exudate.

The most common wounds seen by community nurses are pressure ulcers, diabetic foot ulcers and venous leg ulcers (Health Service Executive, 2009), and these chronic wounds are all prone to excessive levels of exudate. It is important that an appropriate dressing is chosen that can alleviate discomfort and pain levels, and control excessive exudate in order to avoid leakage and dressing saturation.

HOW DO SUPERABSORBENT DRESSINGS WORK?

Superabsorbent dressings are ideal for the management of wounds that produce excessive levels of exudate because — as the name suggests — they can absorb large quantities of fluid and lock it away inside the matrix of the dressing, removing it from the wound bed.

Foam dressings were traditionally used to absorb moderate-to-high levels of exudate, however, when there are excessive levels of exudate the ‘sponge-like’ spaces inside these dressings are placed under pressure and fluid can leak (WUWHS, 2007).

In laboratory tests, superabsorbents have been shown to absorb a lot more fluid so when foam dressings are unable to contain the levels of exudate produced and dressing changes become more frequent, it is worth considering the switch to a superabsorbent (Gray, 2010). Superabsorbents can be used in cases where there is a high level of exudate along with the following:

- Infection
- Periwound skin maceration
- Soft pitting oedema in the lower limb
- Compression is either contraindicated or not tolerated by the patient
- Cellulitis
- Lymphoedema.

Table 1: Performance of superabsorbent brands in terms of absorbency, fluid retention and absorbency under compression (SMTL, 2015)

<table>
<thead>
<tr>
<th>Dressing</th>
<th>Absorbency</th>
<th>Absorbency under pressure</th>
<th>Fluid retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zetuvit® Plus (HARTMANN)</td>
<td>2.25g/cm²</td>
<td>1.22g/cm²</td>
<td>1.44g/cm²</td>
</tr>
<tr>
<td>Kliniderm® (Aria Medical)</td>
<td>0.81g/cm²</td>
<td>0.30g/cm²</td>
<td>0.59g/cm²</td>
</tr>
<tr>
<td>KerraMax® Care (Crawford Healthcare)</td>
<td>0.73g/cm²</td>
<td>0.34g/cm²</td>
<td>0.69g/cm²</td>
</tr>
<tr>
<td>DryMax® EXTRA (Aspen Medical)</td>
<td>1.38g/cm²</td>
<td>0.71g/cm²</td>
<td>1.15g/cm²</td>
</tr>
<tr>
<td>Eclypse® (Advancis Medical)</td>
<td>0.51g/cm²</td>
<td>0.30g/cm²</td>
<td>0.40g/cm²</td>
</tr>
<tr>
<td>Flvasorb® (Activa Healthcare)</td>
<td>1.23g/cm²</td>
<td>0.68g/cm²</td>
<td>0.92g/cm²</td>
</tr>
<tr>
<td>Moxtra® Superabsorbent (Molnlycke Health Care)</td>
<td>1.33g/cm²</td>
<td>0.80g/cm²</td>
<td>0.92g/cm²</td>
</tr>
</tbody>
</table>

Figures 1. Zetuvit Plus absorbs exudate and draws it into the core of the dressing.
There’s absorbency...
Then there’s Zetuvit® Plus absorbency.

Zetuvit Plus out-performs other Super-Absorbent brands in terms of absorbency¹, reducing the chance of fluid accumulation and decreasing the risk of infection².

Absorbency. Comfort. Savings. We’ve got it covered.

For more information, please email your enquiry to: zetuvit.plus@uk.hartmann.info

¹. Data on file, SMTL report 4816, 2015
The presence of high volumes of exudate can severely affect a patient's ability to live normally and have a good quality of life (Benbow and Stevens, 2010). It can prove difficult to lead a normal working life if dressings are constantly becoming saturated and exudate is leaking onto clothes (see ‘patient experience’ box).

Superabsorbents can extend the time between dressing changes meaning fewer dressing changes and an improved quality of life for people living with a highly exuding wound.

**ZETUVIT® PLUS**

Zetuvit Plus (HARTMANN) is a superabsorbent dressing pad that is used for superficial, heavily exuding acute or chronic wounds (Figure 1). It will rapidly absorb excess exudate and draw it into the core of the dressing and will stop excessive amounts of fluid accumulating in and around the wound bed and interfering with healing.

It is extremely soft due to the high amount of fluff incorporated and it can provide cushioning and comfort, particularly around the wound margins. Its core is made from a combination of cellulose fluff and fluid-retaining superabsorbent particles.

Zetuvit Plus can promote wound healing by drawing away the inhibitory factors from the wound and locking them away from the wound’s surface.

The dressing has four layers. The soft hydrophobic outer surface prevents adhesion and damage to the wound and allows the fluid to pass quickly into the layer of hydrophilic cellulose fibres. It also has a green, hydrophobic, air-permeable non-woven layer that prevents contamination and strike-through.

In laboratory tests by SMTL the dressing performed well against equivalent dressings when using a solution that contained protein to mimic wound exudate (Table 1). It has been shown to have excellent absorption rates and absorption capacity under pressure in these comparisons and was in the top two for these parameters in a comparison of nine different dressings (SMTL, 2015).

Its superabsorbency and capacity for fluid mean that there will be fewer dressing changes needed making it cost-effective to use. Zetuvit Plus has also been shown to reduce pain levels (Kaspar, 2009). In a study, involving 61 patients, 100% found the dressing to be ‘very good’, ‘good’ or ‘satisfactory’ in terms of exudate management (Kaspar, 2009).

After several referrals he finally came under the care of his local tissue viability nurse specialist who introduced Zetuvit Plus to manage the excessive amounts of exudate.

After seven months of treatment, Scott could dress his wounds twice a day — once in the early morning and once at night. This has enabled him to return to a steady work routine and he has managed to avoid hospital stays that would have been inevitable under his previous regimen.

Avoiding hospital has allowed him to spend more time with his family. ‘Keeping out of hospital improved my quality of life,’ he said. ‘I must have saved the hospital money by not being there as often.’

Scott added that he needed a dressing that could provide an environment where I’m not embarrassed, where I can be professional with no soaking trousers and no smell. The switch to Zetuvit Plus improved his quality of life and he no longer has the embarrassment of leaking exudate in public.

Scott’s final comment on the switch was overwhelmingly positive: ‘If someone with my condition could have told me how effective Zetuvit Plus was at controlling exudate and smell, and how comfortable it was, I would have changed to the dressing straight away.’
Zetuvit Plus would be a suitable dressing for patients with highly exuding wounds and can handle extreme levels of exudate (see ‘patient experience’ box).

CONCLUSION

Excessive exudate production interferes with wound healing and has a detrimental effect on patients’ quality of life. Exudate management is crucial as wounds need an appropriate level of moisture so that they can heal. Superabsorbent dressings, such as Zetuvit Plus, can handle extreme levels of exudate and prevent leakage and reduce the frequency of dressing changes, allowing people to live a more ‘normal’ life unhindered by saturated dressings that constantly need to be changed. Community nurses will often need to treat chronic wounds and should consider using superabsorbent dressings such as Zetuvit Plus.

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