Living day-to-day with a heavily exuding wound: Recommendations for practice

Patients with heavily exuding wounds face many challenges both physically and psychosocially; from increased pain and discomfort, to social isolation and depression. In order to effectively manage these wounds, the clinician must understand the impact on the patient of living day-to-day with such a wound. An equal emphasis must also be placed on the involvement of the patient in the planning of their care, thus assisting in optimising their wellbeing.

Excess exudate can have a major impact on a patient's quality of life, affecting both their physical and psychosocial wellbeing. Unresolved excess exudate will increase the risk of wound infection and result in delayed wound healing, thus impacting negatively on the patient's quality of life. Contributory factors resulting in excess exudate are poor wound assessment, wound bed preparation and inappropriate dressing selection/wear time.

A clear understanding of exudate (e.g. its role, importance and position in effective wound healing) is crucial for clinicians. This will enable the clinician to clearly identify any changes from the natural process of exudate production and ensure effective objectives are set in place to prevent complications due to poorly managed exudate. It is imperative that the clinician fully understands the impact of a heavily exuding wound on the patient.

Exudate: What is it?

Exudate contains electrolytes, nutrients, proteins, inflammatory mediators, protein digesting enzymes, such as matrix metalloproteinases (MMPs) growth factors and waste products, as well as multiple cells, such as macrophages, platelets, and neutrophils (Romanelli et al, 2010)

Exudate production is a natural component of wound healing. It facilitates the diffusion of vital healing factors, promotes cell proliferation, and provides essential nutrients for cell metabolism. In normal wound healing, exudate production levels will decrease as healing progresses. In chronic wounds, excess unbalanced exudate can delay wound healing (World Union of Wound Healing Societies [WUWHS], 2007).

Heavily exuding wounds

In nonhealing wounds, an excess amount of exudate prolongs the inflammatory phase, impedes growth

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factor availability, and prevents or delay cell proliferation (WUWHS, 2007). Proteolytic activity is increased and this will increase the risk of infection. If wound exudate levels increase and are not effectively managed, the wound bed will become over-hydrated (boggy), and the excess moisture may damage the periwound skin, resulting in further skin breakdown.

The proteolytic enzymes and waste products within exudate will also lead to skin stripping/excoriation and an increased risk of bacterial critical colonisation or infection (Fletcher, 2002; Cutting, 2003). In addition, unresolved exudate management in chronic wounds can lead to increased levels of certain MMPs, which break down healthy tissue, as well as prolonging the inflammatory response, resulting in delayed wound healing (WUWHS, 2007).

High exudate levels can be attributed to a number of factors, including local infection, lymphoedema/oedema, venous insufficiency, congestive cardiac failure, malnutrition, renal or hepatic failure, certain medications (e.g. steroids), and prolonged inflammation. Large wounds are more likely to produce excess exudate, and patient nonconcordance to treatment can also increase the amount of wound exudate (Wound Essentials, 2012a).

The impact of living with a wound is complex and multifactorial. Clinicians frequently focus on wound healing while many patients focus on different priorities, such a reducing pain, malodour, avoiding exudate strikethrough, and minimising the size of bulky dressings (International Consensus, 2012).

Psychosocial impact of living with a heavily exuding wound

The psychological impact on patients with a wound is just as important to address as the clinical signs. The psychological consequences of having a wound may include sleep deprivation, stress, negative mood, reduced mobility, and social isolation. Excess exudate, pain, and malodour may lead to patient distress, anxiety and depression (Upton and South, 2011).

It has been suggested that patients who experience anxiety and depression as a result of high levels of stress may also have a propensity to adopt negative health behaviours such as alcohol and tobacco abuse, making poor dietary choices, and reducing the amount of physical exercise they undertake. Such activities can also have a negative impact on wound healing (Gouin and Kiecolt-Glaser, 2011).

Some patients with heavily exuding wounds may try different methods of coping that are often ineffective and may worsen the wound condition (i.e. wrapping "wet limbs" with plastic bags or removing wet compression bandaging). Individuals with heavily exuding wounds often feel embarrassed about exudate leakage and malodour, and they can have difficulty maintaining their dignity (Walshe, 1995; Hyde et al, 1999). Their altered body image and reduced self-esteem may be as a result of changes in physical appearance and that they have to wear larger and/or darker clothes and footwear to disguise any wound leakage (Persoon et al, 2004). Heavily exuding wounds can impact on everyday household tasks, such as an increase in washing due to frequent clothing and bed linen changes, which may also prove physically demanding for some people.

Chronic heavily exuding wounds will impact a patient's ability to conduct certain day-to-day physical activities that most people take for granted, increasing the risk of social isolation. Activities such as walking, shopping, and socialising due to pain or concerns with "leaking" wounds are sometimes avoided by people with heavily exuding wounds. They may also avoid such activities as they feel it may contribute to the development of further problems within the wound (Persoon et al, 2004). For some of these individuals, maintaining employment may prove impossible, leading to loss of income, loss of independence, and social deprivation.

Stress, pain, negative emotions, malodour, social isolation, and sleep and mobility problems, are all consequences of a highly exuding wound that is not being managed effectively. The subsequent psychological effects of a wound can have a severe impact on an individual's quality of life (Upton and South, 2011).

It is also important that these patients are involved in the planning of their wound treatment as it is evident that when patients have been involved in their own wound care, healing outcomes improve (Department of Health [DH], 2011).

Recommendations for practice

Effective exudate management can reduce many of the challenges of living with a highly exuding wound. Poor exudate management can also lead to increased demands being placed on the clinician's time and resources. It can often result in daily or even twice-daily dressing changes, thus increasing financial costs to the health service, which have to be minimised in the current economic climate (DH, 2010).

To effectively manage exudate, Thomas (2008) suggested that clinicians should:

- Identify and address the underlying causes of the excess exudate, such as infection, oedema, or underlying medical conditions (e.g. heart failure or lymphoedema).
- Assess the patient's health status, both physically and psychologically, and the impact of the wound on his/her quality of life.
- Accurately and frequently assess the wound to ensure an optimum wound-healing environment.
- Develop appropriate care plans – employing appropriate techniques, technologies, and products – to ensure the wound bed is neither

desiccated nor macerated and is primed for healing.
- Prevent periwound skin maceration and/or excoriation.

Many factors will influence dressing choice, which should be based on holistic assessment of the patient, including medical history, wound history, and the physical assessment of the individual (Stephen-Haynes, 2011).

Dressings and exudate management

Moist wound healing is a central tenet of modern wound care, requiring the maintenance of a balance between excess moisture and the wound bed becoming dry (White and Cutting, 2006). Correct and effective dressing selection is an important component of maintaining a moist wound bed and reducing excessive moisture/exudate. Wound dressing selection should be tailored to the condition of the wound and the type and amount of the exudate produced. The maintenance of a moist wound environment without excess, damaging levels of moisture – as well as the complexities of selecting dressings to achieve this balance – can prove challenging for clinicians.

It is important that clinicians are aware of some of the key characteristics of an ideal absorbent dressing as this will assist them in the appropriate dressing selection. The dressing must absorb and retain exudate, prevent chronic wound exudate from coming into contact with the periwound skin and be easy to remove. It must also be comfortable to the patient, work effectively underneath compression, and be cost-effective.

Clinical improvements across a range of factors will be suggestive of improved moisture levels in the wound. These include an improvement in periwound skin, reduced frequency of dressing changes and a reduction or elimination of malodour, as well as a reduction in patient pain and discomfort, a healthy wound bed, and improved quality of life.

Superabsorbent dressings in practice

Traditionally, foam dressings were the first choice for moderately to heavily exuding wounds. More recently, foams have been considered to be best suited for low to moderately exuding wounds (White et al, 2012) and the introduction of superabsorbent dressings has provided clinicians with a dressing that can effectively manage high levels of wound exudate and skin moisture. Superabsorbent dressings have been linked to improved patient quality of life and healing outcomes, cost effectiveness, and a reduction in the time a clinician needs to spend with a patient (Rafter, 2011; Gardner, 2012).

Benefits of an appropriate superabsorbent dressing include reduced pain and discomfort, improved periwound skin, reduced malodour, progression in wound healing, and a reduction in the amount of dressing changes required. An effective superabsorbent dressing will also assist in the effective management of chronic limb oedema and conditions such as lymphorrhea ("weepy, wet legs").

Flivasorb and Flivasorb Adhesive

Two such superabsorbent dressings that are effective in meeting the aforementioned clinical challenges of excess exudate are Flivasorb® and Flivasorb® Adhesive (Activa Healthcare). Flivasorb and Flivasorb Adhesive are indicated for the management of moderately to heavily exuding wounds, including pressure ulcers, leg ulcers, diabetic ulcers, postoperative wounds healing by secondary intention, laparotomy wounds, fistulae/sinuses, and superficial or partial thickness burns.

Flivasorb Adhesive differs from Flivasorb due to its adhesive border, but shares the same benefits. These benefits include absorption and retention of large amounts of exudate; prevention of maceration and excoriation; and the reduction of bioburden (Wiegand et al, 2013).

This dressing is capable of absorbing up to 20 times its own weight in fluid (Wound Essentials, 2012b).

Its adhesive border means Flivasorb Adhesive requires no additional fixation, which makes it particularly useful for areas of the body where it may be difficult to apply a dressing that requires secondary fixation (e.g. the sacrum or groin; Wound Essentials, 2012b).

Flivasorb and Flivasorb Adhesive share properties that mean they fit well with the profile of an ideal dressing for the management of high exudation (Adderley, 2008; Stephen-Haynes, 2011). An algorithm regarding the dressing selection for these dressings can be found in the *Wound Essentials* How to Guide (2012b).

A case study (Faucher et al, 2012) examined the use of Flivasorb for 7 days in 15 patients with highly exuding wounds. At the beginning of the study, seven patients presented with periwound maceration, a figure that fell to one by the end of the study. After 3 days, dressing change frequency reduced to twice weekly from daily in 12 patients.

An evaluation (Mustafi et al, 2012) of 11 patients using Flivasorb Adhesive

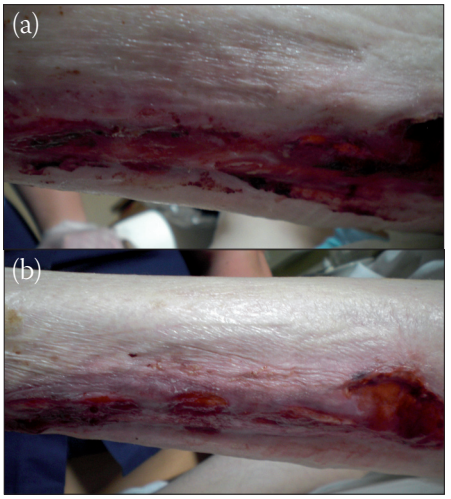

Figure 1. ***(a) Highly exuding trauma wound to the lower limb. (b) Improvement in the wound following exudate management with Flivasorb superabsorbent dressing.***

found that these individuals reported comfort during wear to be "good" to "excellent", and reported "low" or almost "no" pain during dressing changes.

A prospective 4-week study (Verrall et al, 2010) of 16 patients with highly exuding wounds found a change of treatment to Flivasorb resulted in a reduction in dressing change frequency by 1–2 visits per week. The cost saving per patient associated with this reduction in dressing change frequency was £6240 per year for each individual who does not heal within 1 year.

Conclusion

It is evident that the impact of living day-to-day with a heavily exuding wound on a patient is significant. This can range from physical symptoms, such as increased pain, anxiety, stress, low self esteem, altered of body image, and depression to psychosocial factors, such as social isolation, loss of independence, financial crisis, loss of family role, and increased pressure placed on interpersonal relationships (Franks et al, 2006).

In order to assist in the management of such symptoms, it is imperative that the clinician fully understands the impact of living with a highly exuding wound. In addition, it is crucial that they have the knowledge and skills to undertake both a comprehensive and robust patient and wound assessment, followed by the effective delivery of care that takes in to account the complex needs of patients living with a heavily exuding wound. As a result, outcomes for our patients will dramatically improve (International Consensus, 2012). WE

References

Adderley U (2008) Wound exudate: what it is and how to manage it. *Wound Essentials* 3: 8–13

Cutting K (2003) Wound exudate, composition and functions. *Br J Community Nurs* 8(Suppl 9): S4–9

Department of Health (2011) *White Paper: Equity And Excellence, Liberating the NHS*. DH, London

Department of Health (2010) *The NHS Quality, Innovation, Productivity and Prevention Challenge: An Introduction for Clinicians*. DH, London. Available at: http://bit.ly/10GzWaU (accessed 15.05.2013)

Faucher N, Safar H, Baret M et al (2012) Superabsorbent dressings for copiously exuding wounds. *Br J Nurs* 21(12): S22-8

Fletcher J (2002) Exudate theory and the clinical management of exuding wounds. *Professional Nurse* 17(8): 475–9

Franks P, Moffatt C, Doherty D (2006) Longer term changes in quality of life in chronic leg ulceration. *Wound Repair Regen* 14(5): 536–41

Gardner S (2012) Managing high exudate wounds: how to guide. *Wound Essentials* 7(1). Available at: http://bit.ly/10Yp1dk (accessed 05.06.2013)

Gouin JP, Kiecolt-Glaser JK (2011) The impact of psychological stress on wound healing, methods and mechanisms. *Immunol Allergy Clin North Am* 31(1): 81–93

Hyde C, Ward B, Horssall J, Winder G (1999) Older women's experience of living with chronic leg ulceration. *Int J Nurs Pract* 5(4): 189–98

International Consensus (2012) *Optimising Wellbeing and People Living with a Wound: An Expert Working Group Review*. Wounds International, London. Available at: http://bit.ly/JYSZGv (accessed 15.05.2013)

Mustafi N, Hampton S, Krähenbühl S et al (2012) *First evaluation of an adhesive superabsorber dressing on 11 patients with wounds of different aetiologies and exudate levels*. Poster presentation. 22nd Conference of the European Wound Management Association, Vienna: 23–25 May

Persoon A, Heinen MN, van der Vleuten CJM et al (2004) Leg ulcers: a review of their impact on daily life. *J Clin Nurs* 13(3): 341–54

Rafter L (2011) Management of acute cellulitis with the Eclypse Boot®. *Wounds UK* 7(4): 62–8

Romanelli N, Vowden K, Weir D (2010) Exudate management made easy. *Wounds International* 1(2). Available at: http://bit.ly/10XMFFg (accessed 15.05.2013)

Stephen-Haynes J (2011) Managing exudate and the key requirements of absorbent dressings. *Br J Community Nurs* 16(Suppl 3): S44–9

Thomas S (2008) The role of dressings in the treatment of moisture related skin damage. *World Wide Wounds*. Available at: http://bit.ly/he9Zwg (accessed 15.05.2013)

Upton D, South S (2011) The psychological consequences of wounds – a vicious circle that should not be overlooked. *Wounds UK* 7(4): 136–8

Verrall D, Coulbourn A, Bree-Aslan C (2010) Evaluating a super-absorbent dressing (Flivasorb) in heavily exuding wounds. *Br J Nurs* 19(7): 449–53

Walshe C (1995) Living with a venous leg ulcer: a descriptive study of patients' experiences. *J Adv Nurs* 22(6): 1092–100

White R, Cutting KS (2006) Modern exudate management: a review of wound treatments. *World Wide Wounds*. Available at: http://bit.ly/H3hmle (accessed 15.05.2013)

White R, Gardner S, Cutting KS et al (2012) What is the current status of foam dressings? WUK debate. *Wounds UK* 8(3): 21–4

Wiegand C, Abel M, Muldoon J et al (2013) SAP-containing dressings exhibit sustained antimicrobial effects over 7 days in vitro. *J Wound Care* 22(3): 120, 122–4, 126–7

World Union of Wound Healing Societies (2007) *Wound Exudate and the Role of Dressings. A Consensus Document*. MEP Ltd, London. Available at: http://bit.ly/R95zuu (accessed 15.05.2013)

Wound Essentials (2012a) Managing high exudate wounds: how to guide. *Wound Essentials* 7(1). Available at: http://bit.ly/PkRbMC (accessed 15.05.2013)

Wound Essentials (2012b) Flivasorb & Flivasorb Adhesive: how to guide. *Wound Essentials* 7(2). Available at: http://bit.ly/YVTahy (accessed 15.05.2013)