Using Debrisoft® for wound debridement

Maureen Benbow briefly considers different methods of wound debridement and focuses on the advantages associated with a novel, alternative method of debridement.

**Key words:**
Assessment
Training
Debridement

The importance of debridement as an intrinsic element of chronic wound management cannot be underestimated with several well-established methods currently in use. However, not all methods are suitable for all settings and patients, nor will they sit within the professional competence of the health care practitioner. A working knowledge and understanding of the risks and benefits of possible debridement alternatives is required for appropriate decision-making in relation to optimal wound management. This article briefly considers different methods and focuses on the advantages associated with a novel, alternative method of debridement.

**Aims of debridement**
As part of wound bed preparation debridement is necessary to help to maintain moisture balance, prevent infection and achieve wound closure (Kirsch et al., 2006). Effective debridement removes cellular waste, debris, biofilm, harmful exudate and metabolic waste from the wound bed that impedes healing but few randomised controlled trials have been conducted to aid best selection (Calianno & Jakubek, 2006). The presence of devitalised tissue delays healing by interfering with the all-important inflammatory phase and can act as a reservoir for bacteria to flourish in which increases the risk of infection (Cutting & Harding, 1994). Baharestani (1999) takes this further by suggesting several more reasons to remove devitalised tissue. These include the imposition of additional metabolic load, ongoing inflammation, compromised restoration of skin function, psychological stress, abscess formation, odour, nutritional loss through exudate (associated with inflammation), obscuring of the wound depth, less than perfect clinical and cosmetic result and delayed healing. The aim of debridement is to prepare the wound bed for healing and if, the process is accelerated, healing will be achieved more rapidly (Steed et al., 1996).

**Methods of debridement**
Consideration and selection of the appropriate debridement method must identify those factors that initially predisposed to the formation of slough or necrotic tissue, the condition of the patient and the characteristics of the wound, the competence of the health care practitioner, the setting and available resources. Most methods of debridement require specialist training, knowledge and skills.

Debridement methods may be described as selective and non-selective; the former refers to methods that remove both devitalised tissue and normal tissue while the latter restricts removal to devitalised tissue. There are five main methods of debridement surgical or sharp, autolytic, enzymatic, mechanical and biosurgery.

Before deciding on the most appropriate debridement method the following should be considered:

- What the practitioner hopes to achieve – prevention of infection, removal of non-viable tissue, symptom control
- How quickly this is to be achieved – depending on the amount, type and anatomical location of devitalised tissue
- How best to debride, whether the practitioner has the necessary competence and whether referral to the tissue viability service is necessary (Gray et al., 2010).

**Maintenance debridement**
Following recommendations that chronic wounds will often need repeated debridement (Enoch & Harding, 2003), an expert consensus group was convened in 2008 to propose maintenance debridement as a therapeutic intervention to address the problem of chronic wounds which are characterised by an adequate wound bed but absent or slow healing (Falanga et al., 2008). It is considered that maintenance debridement is more likely to be effective than a single intervention to remove the necrotic burden and obtain healthy granulation tissue. Maintenance debridement is seen to be a proactive way to "jump-start" the wound with the aim of keeping it in healing mode, even when the wound does not appear to need debridement because of an apparently healthy wound bed (Falanga, 2008).

**Debrisoft®**
Debrisoft® is described as a groundbreaking, fast acting, cost-effective, highly efficient, active debridement system that rapidly removes wound debris, necrotic material, slough, bacteria and exudate from the wound bed, and scaly or hyperkeratotic tissue from the surrounding skin. This is achieved without harming granulating or epithelialising tissue (Figures 1 & 2).

It comprises a pad of 100 per cent knitted mono filament(single) polyester fibres with the outer surface coated with polyacrylate, thus providing stability and preventing shedding of fibres. Debrisoft contains no pharmacologically toxicologically potentially irritant substances. The top of the fibres are cut at a special angle to debride with minimal pressure, avoiding damage to the wound surface. This design also ensures that exudate, cellular debris and keratinos bind into the product and are not released back into the wound.

**Method of use**
No special training is necessary for the use of Debrisoft® and it can be used easily, safely and rapidly to comfortably debride in any health care setting by a...
range of practitioners. It can also be used to effectively remove crust and hyperkeratosis from the wound edges and surrounding skin. The soft, flaccid side of the pad is moistened with saline or tap water (according to local guidelines) and gently wiped across the wound surface or surrounding skin. Where there is thick tenacious slough or hard necrosis present, softening by autolysis prior to using Debrisoﬂ® is advisable. Debrisoﬂ® is discarded in accordance with the local policy for the disposal of clinical waste. Following debridement, the wound should be re-assessed and an appropriate dressing selected for ongoing management of the debrided wound.

Studies have found the average duration of a treatment for superficial wounds is between two to four minutes and a couple of treatments may be necessary to clear the slough (Hammerl et al., 2011). Bahar et al. (2011) conducted a trial of the efficacy, safety, tolerability and user satisfaction of debridement with Debrisoﬂ® in 60 patients. The study results demonstrated efficacy in debriding the wound and surrounding skin, no reports of pain in use, no harm to developing epithelial tissue, and, compared to mechanical and autolytic debridement, the results were rated as good to very good. The speed of successful debridement, ease of use, patient tolerability and cost-
effectiveness associated with the use of Debrisoﬂ® will surely support its inclusion in wound care formularies (Figures 3 & 4).

Conclusion
Selection of the most suitable debridement method for an individual wound should be based on the assessed needs of the wound, the patient and consideration given to the knowledge and competence of the practitioner, and the health care setting. In these times of hospital bed pressures, health care associated infections and costs efficiencies, novel products must be carefully considered for their advantages over current methods.

References


