Your guide to wound debridement and assessment

Michelle Greenwood
Lead Nurse, Tissue Viability, Walsall Healthcare NHS Trust

Lorraine Grothier
Clinical Nurse Specialist, Tissue Viability, Central Essex Community Services

Case 1
Presentation: This patient was referred to a tissue viability nurse with a venous leg ulcer that was leaking serous fluid. The wound measured 47 x 33mm and the wound bed comprised 70% slough and 30% granulation tissue; there was slight maceration on the surrounding skin (Figure 1).
Outcome: After one debridement session with Debrisoft (which lasted 5–10 minutes), the slough reduced dramatically, showing healthy granulation tissue (Figure 2).

Case 2
Presentation: A vascular consultant referred this patient to the tissue viability service for assessment of recurrent mixed aetiology leg ulcers. The wound on the left medial malleolus measured 46 x 24 x 5mm. It contained approximately 90% superficial slough (Figure 1).
Outcome: Following one short debridement session with Debrisoft, there was only a minimal amount of slough present and the wound margins were visible (Figure 2).

Case 3
Presentation: This patient had a deteriorating venous leg ulcer that was leaking serous fluid. The ulcer was circumferential, with the ankle measuring 31cm and the wound length 13.2cm. The wound bed comprised 100% slough (Figure 1).
Outcome: Following a single use of Debrisoft lasting 5–10 minutes, only a small amount of superficial slough was present, which was removed by autolytic debridement. The condition of the surrounding skin improved considerably (Figure 2).

References

Lloyd-Jones M (2012) Wound cleansing: has it become a ritual or is it a necessity? Br J Community Nurs Suppl 17: S22-6

Debridement is the removal of dead tissue (also known as non-viable or devitalised tissue), infected or foreign material from the wound bed (Wounds UK, 2013). It is undertaken to produce a viable wound bed and so facilitate healing. Methods of debridement available to general nurses include mechanical, larval (maggot) and autolytic. Other methods, such as sharp and surgical debridement, require specialist skills and training. When selecting a method, the clinician must be aware of all the options and determine whether or not he or she has the skills and knowledge to undertake it, and assess any potential risks for the patient (Wounds UK, 2013). The clinician does not have the skills, he or she refer the patient to a specialist. Mechanical debridement is regarded as the fastest method of debridement (Strohal et al, 2013). Types of non-viable tissue

**Sloughy tissue:** This is a build-up of dead white cells in the wound. It can also include bacteria and rehydrating necrotic tissue. Slough can act as a focus of infection and so should be removed (Kingsley, 2001).

**Necrotic tissue:** This is dead tissue. It may present as soft, black tissue, or as a black eschar, or be grey or off-white (Strohal et al, 2013).

**Wound assessment**

Wounds should be assessed by a knowledgeable practitioner using a framework to produce a wound bed preparation (such as the TIME framework), as this will maximise the potential for healing. Debridling devitalised tissue can make it easier for healing. Debridement methods for general clinicians

These are listed in order of speed of action (Strohal et al, 2013).

**Mechanical debridement**

Old methods involve the use of dry gauze dressings, wet-to-dry gauze dressings, impregnated gauze/hull dressings. These methods are no longer considered acceptable (Strohal et al, 2013). A new method involves the use of a monofilament fibre pad to remove devitalised tissue from the wound bed. Monofilament debridement pad

A new dressing provided by Active Healthcare (Delsys Healthcare) offers a safe alternative for removing slough and hyperkeratosis (thickened outer layer of the skin). This pad is reported to cause minimal pain and can be used by novice clinicians. It can be used in most environments, including the bedside, in clinic or in the home. It is selective, so will not remove healthy granulation tissue, and can be used in conjunction with other methods—for example, before or after larval therapy or sharp debridement or in addition to autolytic debridement. It is suitable for all wounds and on hard, dry eschar (Wounds UK, 2013).

**Larval (maggot) therapy**

Live maggots are placed on necrotic or sloughy tissue. The maggots produce a proteolytic enzyme that degrades and liquefies the devitalised tissue, which they then ingest.

**Autolytic**

Autolysis uses the body's enzymes and moisture to rehydrate, soften and liquefy hard eschar and slough. Products capable of supporting moist wound healing or donating fluid to the wound can assist this process. Most clinicians can safely undertake this method, but it is the slowest option (Wounds UK, 2013).