Managing wound slough in the community patient

Slough is defined as devitalised tissue made up mainly of fibrin, white blood cells and debris that collects in the wound bed (Brown, 2013). It can indicate the presence of infection, ischaemia or a dehydrated wound bed (Atkin, 2014).

Different types of devitalised tissue appear in the wound bed, ranging from superficial slough, thick slough, dehydrated tissue and necrotic hardened eschar, however, the presence of slough interrupts granulation and delays healing. It can also be a focus of infection as bacteria can thrive in it (White and Cutting, 2008).

Slough interferes with the action of leucocytes (Thomas, 1997) and allows biofilms to form, especially in chronic wounds (Davis et al, 2006). This complicates the healing process and can make infections difficult to treat. Slough is often malodorous (Young, 2014) and its presence can be disturbing to the patient. It can also: Obscure the wound bed and hinder assessment; Hide and/or increase the risk of infection; Increase the volume of exudate in the wound bed.

**WHY DESLOUGH WOUNDS?**

Desloughing and debridement wounds is an essential part of preparing the wound bed for healing and together involve the removal of devitalised tissue, debris, slough and necrosis, reducing the bacterial burden of the wound and minimising the risk of infection (Vowden and Vowden, 2011; Strohal et al, 2013).

Slough and devitalised tissue can stimulate the overproduction of matrixmetalloproteases (MMPs) and this slows the healing process. Higher levels of MMPs may also result in an inappropriate diagnosis of infection, or an inadequate response to infection, as they can mask or mimic the signs of infection (Kelly et al, 2013).

The longer that slough is left in a wound site, the harder it can be to remove (Black et al, 2010), which will have further ramifications for healing rates. Chronic wounds may need repeated desloughing to return the wound to an acute state and kick-start healing (Vowden and Vowden, 2011). Desloughing has other benefits such as allowing easier examination of the wound (Young, 2014). It can also reduce malodour.

**WOUND ASSESSMENT**

To understand if desloughing the wound is appropriate, the wound must first be cleansed and comprehensively assessed. The wound should be evaluated and information sought on:

- **Cause**
- **Location and size**
- **The condition of the wound bed and the tissue type present**
- **Condition of the surrounding skin**
- **Infection levels**
- **Blood supply to the wound**
- **Exudate levels**

The patient’s health and treatment preferences should also be considered before desloughing a wound (Brown, 2013), as some of the methods used to remove devitalised tissue — such as sharp debridement — are invasive and need to be carried out by skilled practitioners, which may not be appropriate in the community setting.

**HOW TO DESLOUGH A WOUND**

The method most frequently chosen in the community setting is autolytic desloughing (Kelly et al, 2013).
This is where the body’s own white blood cells and proteolytic enzymes are encouraged to break down the devitalised tissue in the wound bed. If the body’s own natural cleansing ability is unable to cope with the volume of exudate and sloughy tissue in the wound bed, clinical intervention with carefully chosen dressings can stimulate the healing process by hydrating the wound and allowing the enzymes in white blood cells to break down the protein that fixes devitalised tissue onto the wound bed (Anderson, 2006).

The aim of desloughing is to prepare a healthy wound bed where healing can occur. It is important to make sure that the wound has the optimum level of moisture and the choice of dressing will depend on the condition of the wound and its moisture levels. If the wound bed is dry, a moisture-donating dressing can be chosen; if it is wet, then a moisture-absorbing dressing should be used. It is important that the correct balance is maintained otherwise wound healing will not be achieved.

**Moisture-donating dressings**

These dressings donate moisture to dead tissue, helping to facilitate autolysis by providing the right environment for white blood cells to break it down. However, they are mainly suitable for wounds with dry necrosis and include: hydrogels, hydrocolloids and honey-based dressings. Hydrogels work by rehydrating the wound bed and the devitalised tissue, making it easier to be removed. They need to be used with a secondary dressing, such as a hydrocolloid that can retain moisture (Kelly et al, 2013). Hydrocolloids absorb exudate and form a gel that can stimulate autolysis without causing maceration (Kelly et al, 2013). Honey has an osmotic action that draws lymph to the wound bed and stimulates autolysis.

**Moisture-absorbing dressings**

These dressings absorb moisture without drying out the wound bed and maintaining moisture balance at the wound surface. They also help to prevent skin damage to the periwound skin from excess exudate and include alginates and hydro-desloughing fibres. Alginates are suitable for use with wounds with moist necrosis, or deep or superficial slough. Certain dressings (i.e. UrgoClean®, Urgo Medical) contain hydro-desloughing fibres that can absorb and bind slough away from the wound, removing MMPs and bacteria and controlling the levels of proteases in chronic wounds. This reduces the risk of infection and stops MMPs affecting protein synthesis or the action of growth factors.

**REFERENCES**


**WHAT’S YOUR NEXT STEP?**

To use the knowledge that you have gained from this article to inform your continuing professional development (CPD), you should take the following steps before logging onto the website (www.jcn.co.uk/learning-zone/) to take the learning zone test:

**Reflect**

Are you able to explain the differences between slough and necrosis?

Do you understand the different types of tissue that can be found in the wound bed?

**Evaluate**

Do you appreciate how desloughing the wound can promote healing?

**Act**

Read the article when you have a spare few minutes in the day. Make some notes on what you have learned, then visit the online test (www.jcn.co.uk/learning-zone/) to complete this subject.

The whole test, which involves reading this article and answering the online questions, should take you 90 minutes to complete.

Finally, download your certificate to show that you have completed this JCN e-learning unit as part of your CPD portfolio.

Tough on slough gentle on the wound

Effective desloughing from UrgoClean

- UrgoClean® is for the management of exuding and sloughy wounds
- Indicated for Venous leg ulcers, Pressure ulcers, Acute wounds, Cavity wounds, Diabetic Foot Ulcers
- Pain free dressing change*
- Removes in one piece*
- UrgoClean® is available in a pad and a rope including a probe

Find out more about UrgoClean and our complete range at www.urgo.co.uk

*UrgoClean® Pad and Rope, Data on file, 2012, Urgo