Wound Cleansing

Wound cleansing is the use of fluids to remove surface contaminants, bacteria and remnants of previous dressings from the wound surface and its surrounding skin.

The aim of wound cleansing is to establish an environment to promote healing (Horrocks, 2006). Although wound cleansing is considered to be an integral part of wound care, it is often said to be a ritualistic procedure that is undertaken with very little thought or rationale. Ongoing assessment is essential to ensure that wound cleansing only occurs when there are clinical indications.

Clinical indications for wound cleansing

- To remove contaminants at the wound bed
- To remove debris and foreign bodies following trauma
- To remove debris and microorganisms in infected wounds
- To remove superficial slough
- To remove dressing materials
- To remove crusting and hyperkeratosis from wound edges and surrounding skin (Figures 1 and 2)
- To remove excess exudate and aid with malodour
- To aid with personal hygiene and patient comfort (adapted from Main, 2008)

Do not cleanse

- Clean granulating or epithelialising wounds
- Gangrenous wounds, where the aim of treatment is to keep the wound dry

Wound cleansing solutions

- Normal saline
- Sterile water
- Tap water
- Antiseptics/antimicrobials should only be used where there are clinical indications, for example, infection or critical colonisation (Sibbald et al, 2000)

Figure 1: crusting around wound edge before cleansing with Debrisoft.

Figure 2: wound after cleansing with Debrisoft.
Wound cleansing solutions should:
• Be non-toxic to human tissue
• Reduce the number of microorganisms
• Not cause sensitivity reactions
• Remain effective in the presence of organic material
• Be widely available and cost-effective

Solution temperature
Studies suggest that wound temperature influences wound healing, with healing best at a body temperature between 36 and 38°C. Delayed healing is demonstrated when the temperature falls below core body temperature or rises above 42°C.

It is therefore important to ensure that any solution used is, where possible, warmed to body temperature. Not using solutions at body temperature can result in taking up to 40 minutes for the wound to return to normal temperature and up to 3 hours for recommencement of mitotic cell division (McGuiness et al, 2004; Magson-Roberts, 2006).

Commonly-used techniques for wound cleansing
Immersion Immersing the limb in warm water assists in the removal of build-up of exudate and slough, while cleansing the affected area without damaging granulation or epithelialising tissue. It also has the benefit of allowing the patient to wash his/her leg and foot and maintain personal hygiene (Lindsay, 2007).

Bathing or showering This method gives the patient the control and autonomy, where appropriate, to remove their own dressings and involves them directly in their own care (Watret and Armitage, 2002).

Swabbing When swabbing the wound, using a gloved hand is preferred to using forceps. Use non-woven gauze swabs, as gauze and cotton wool have been shown to shed fibres into the wound (Towler, 2001).

Irrigation Cleansing by irrigation is considered advantageous, in that there is no problem with shedding fibres into the wound. Commercial products are available, including spray cans and pods, which have been designed to deliver irrigation at the appropriate pressure without causing trauma. They eliminate the need for supplementary equipment, such as syringes and forceps (Williams, 1999; Towler, 2001).

Monofilament fibre debrider (such as Debrisoft) This can be used to gently remove slough and debris without causing trauma or pain and removes crusting and hyperkeratosis from surrounding skin (Benbow, 2011b). See Figures 1 and 2.

Figure 3: use gloved hand, rather than forceps, with non-woven gauze, for wound cleansing. The cleansing solution should be at body temperature.

References
• For references, see Lloyd Jones M (2012) British Journal of Healthcare Assistants 6(6): 267–71

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