

Principles of skin cleansing in continence management

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Principles of skin cleansing in continence management

Urinary incontinence affects up to six million people in the UK (Irwin et al, 2006 and National Institute for Health and Clinical Excellence (NICE) , 2013), with around 1% of adults regularly experiencing faecal incontinence (NICE, 2007). The prevalence of both urinary and faecal incontinence increase with age (Goode et al, 2005), resulting in a significant number of people being placed into long-term care settings (Fonda, 2005). Incontinence is cited as a major cause of skin breakdown, with the risk increasing with age (Sibbald et al, 2003).

Incontinence associated dermatitis (IAD) is well recognised as a risk factor for the development of pressure ulcers (Beckman et al, 2014). Other factors include a high pH, colonisation by micro-organisms and friction (Gray et al., 2007). IAD is the clinical symptom of moisture associated skin damage and is a common appearance in people with urinary and faecal incontinence (Doughty et al, 2012 and Gray et al., 2007).

IAD is inflammation of the skin that occurs as a result of contact with urine and/or faeces (Gray et al, 2011). Around 50% of people with faecal and urinary incontinence are affected by IAD (Gray et al., 2007). Studies suggest that IAD can develop quickly even with structured skin care regimens, with added risk factors such as poor diet, limited mobility, poor manual handling, reduced oxygen perfusion and the use of absorbent and occlusive products for long periods or infrequent product changes (Gray et al, 2007). Figure 1 shows the clinical appearance of IAD.



This is from an article I did for *Nursing and residential care* July 2012 Vol 14 No 7 – so hopefully you already have the rights?

The skin is the largest organ in the body and providing a protective barrier against mechanical, thermal and physical injury. Skin has three layers: the epidermis (an elastic layer on the outside of the skin structure), the dermis (the inner layer which is tightly connected to the epidermis) and the subcutaneous layer (the layer under the dermis made up of connective tissue and fat) (Zaidi and Lanigan, 2010). A good way of understanding the barrier function of the skin is to imagine it as a brick

wall. Corneocytes are flattened dead cells, that make up the outer layer of the epidermis (the stratum corneum). Corneocytes form the “bricks”, and between these a double layer of lipids (fatty materials) and water provide the mortar. Some lipids allow water to permeate through and some are impermeable to water – making the epidermis semi-permeable.

The skin prevents moisture loss and provides an immune organ to detect infections. The acid mantle on the skin surface is a fine slightly acidic film made up of a mixture of secretions (sweat and sebum) which provides a barrier to bacteria, viruses and other potential contaminants, such as urine and faeces (Gray et al, 2011). The normal pH of skin is slightly acidic at 4.5-6.2 (Gray et al, 2011). Bacteria are killed by the acid preventing damage to the skin. If the skin is stripped of the acidic mantle, for example by using strong alkaline soap or cleansers, this disturbs the distribution of corneocytes which protect the skin, and bacteria can pass through the skin to the epidermis. Contaminants such as urine and faeces are predominantly alkaline, so the skin's moderate acidity normally helps neutralise the effects (Rippke., Schreiner and Schwanitz, 2002).

The harmful effects of water on the skin are well known. When the skin becomes dehydrated, corneocytes do not shed normally and the skin becomes rough, thickened and flakey, eventually cracking due to loss of elasticity. Where overhydration or maceration occurs, the skin allows the passage of irritants through the barrier, precipitating inflammation which can lead to dermatitis (Voegeli, 2012). Maceration also increases the risk of damage from friction (Mayrovitz and Sims, 2001). Overhydration of skin can occur due to skin cleansing methods and excessive washing (Ersser et al, 2005).

IAD prevention strategies include, cleansing, moisturising and application of skin protectants or moisture barriers (Beckman et al, 2015). Treatment includes protecting the skin from further exposure to irritants and eradicating infections.

Principles of characteristics of the ideal product for skin cleansing in incontinence

- Clinically proven to prevent and/or treat IAD
- Close to skin pH (although pH is not relevant in all products, e.g. those that do not contain hydrogen ions which includes barrier films)
- Low irritant potential/hypoallergenic
- Cleansing considers caregiver time and patient comfort
- Does not increase skin damage
- Acceptable to patients, clinicians and caregivers
- Minimises the number of products
- Cost-effective

Adapted from Beckman et al, 2015

Cleansing

Standard soap is alkaline and has been demonstrated to alter skin pH, thus attacking corneocytes and potentially damaging the protective barrier function of the skin. This can be further compromised by the texture of traditional washcloths and flannels, which can cause friction damage (Beckman et al, 2011). Additionally the use of water alone can impair skin barrier function by increasing the water diffusion through the skin. Cleansing can disrupt the skin's barrier function and so a balance needs to be made between removing skin irritants and minimising irritation from cleansing. Many skin cleansers are no-

rinse, and can be left on the skin following application and are also quick drying, thus reducing friction from manual drying (Beeckman et al, 2015). An additional benefit of non-rinse cleansers is saving staff time which can improve efficiency (Lewis-Byers., Thayer and Kahl, 2002). Specifically produced continence care wipes, such as the Tena wet wipe®, are made of smooth material to reduce friction damage and are pre-moistened to cleanse, restore and protect without the requirement to rinse or dry. These types of product have also been found to enhance adherence to skin care protocols, reduce the care burden and enhance staff satisfaction (Beeckman et al, 2009).

The use of moisturisers is also key to good skin care. Dry skin is prone to cracking and infection. Moisturisers restore the barrier function of the epidermis, cover small fissures in the skin, provide a soothing protective film and increases the water content in the epidermis (Beeckman et al, 2015).

If a good skin care regimen and effective continence products are used and changed regularly, barrier products should not be required (Ersser et al, 2005). However they can be used prophylactically on vulnerable skin such as the elderly, if the skin is intact. Where the skin is broken they can be used to protect the surrounding skin from maceration.

In conclusion the main principles of skin cleansing where a patient is incontinent of urine and/or faeces are:

- Cleanse at least daily and after every episode of faecal incontinence (NICE, 2007)
- Use a gentle technique with minimal friction, avoiding rubbing/scrubbing of skin
- Avoid standard (alkaline) soaps
- Choose a gentle non-rinse liquid skin cleanser or pre-moistened wipe (designed and indicated for incontinence care), which has a pH similar to normal skin
- Where possible use a soft disposable non-woven cloth

(Adapted from Beeckman et al, 2015).

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