

# SKIN CARE: MANAGING THE SKIN OF THE INCONTINENT PATIENT

Both urinary and faecal incontinence can have a significant impact on skin integrity. Inappropriate management can cause the skin to become excoriated, leading to large areas of incontinence-associated dermatitis (IAD), which can cause pain and discomfort. This article examines how to manage the skin in the presence of incontinence.

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Preserving functionality of the skin in patients with incontinence can prove to be challenging and problematic to both patients and their care providers.

Skin breakdown is characterised by erosion of the epidermis, the upper layer of skin and the moist, macerated appearance of the skin, (Gray, 2004). Incontinence and its associated skin breakdown can have a considerable effect on the patients physical and psychological well being (Sibbald et al, 2003).

Incontinence is known to increase with age with 31% of older women and 23% of older men affected and between 30–85% of nursing home residents recognised as incontinent (Bale et al, 2004). Studies indicate that chronic faecal incontinence affects between 1–10% of the adult population and that 0.5-1.0% experience regular incontinence affecting their quality of life (National Institute of Health and Clinical Excellence [NICE], 2007). Combined urinary and faecal incontinence has been reported to be as high as 50% in

long-term nursing home residents (Newman et al, 2007).

Incontinence is one of the major risk factors for the development of skin breakdown or incontinence-associated dermatitis (IAD) (Beekman et al, 2009; Rees and Pagnamenta, 2009). This article aims to look at the impact of incontinence on skin integrity, the importance of assessment and treatment options available.

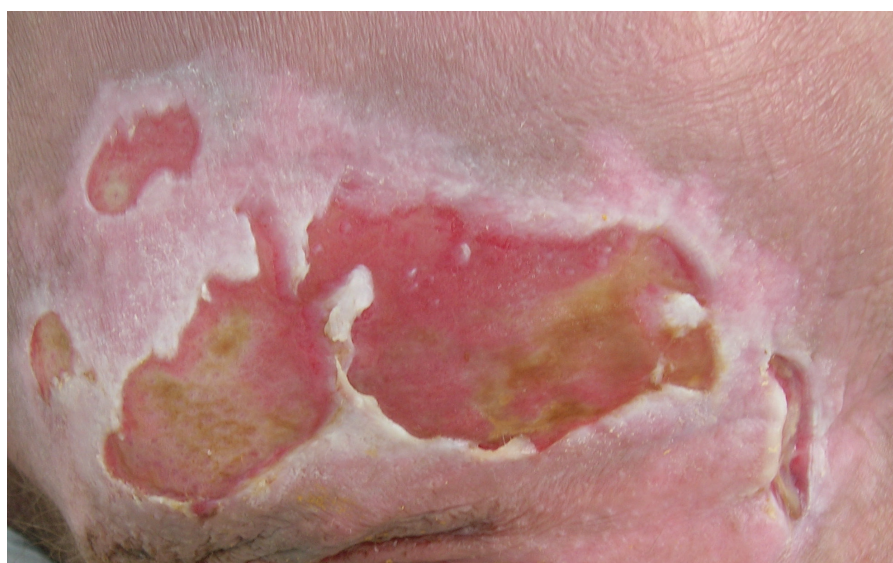
## Incontinence-associated dermatitis

IAD, moisture lesions, irritant dermatitis and/or perineal dermatitis are all terms used to commonly describe the effects

of incontinence on the skin surrounding the peri-anal area. All refer to the effects of inflammation of the skin that occurs when urine, faeces or both come into contact with the perineal area (Langemo et al, 2011).

The perineal area includes the areas between the vulva/scrotum and anus, buttocks, and perianal, coccyx and inner/upper thigh region (Brown and Sears, 1993).

IAD is generally characterised by superficial erosion of the epidermal layer of the skin along with a wet macerated appearance (*Figure 1*). This can be further complicated by spreading redness, erythema of the surrounding tissue, pain and



*Figure 1. Incontinence-associated dermatitis (IAD).*



Figure 2. IAD with spreading erythema and induration across the buttocks.

induration (a hardness or firmness of the area, compared to the feel of non-affected areas) (Figure 2).

There are some generally recognised theories as to how IAD occurs but none of these are definitive and it is possible that the cause is a combination of them (Figure 3):

- ▶▶ Urine and faeces convert urea to ammonia, which destroys the skin's acid mantle. At the same time, due to the presence of urine and faeces the skin's pH becomes more alkaline activating both proteolytic and lipolytic enzymes, i.e. proteases and lipases cause irritation and tissue breakdown (Leyden, 1986)
- ▶▶ The skin becomes overhydrated — this can be due to urine and/or washing methods, such as overwashing. The skin is then more permeable to irritants, at greater risk of breakdown and more vulnerable to bacterial growth and fungal invasion (Langemo et al, 2011)
- ▶▶ When skin exposed to incontinence is also exposed

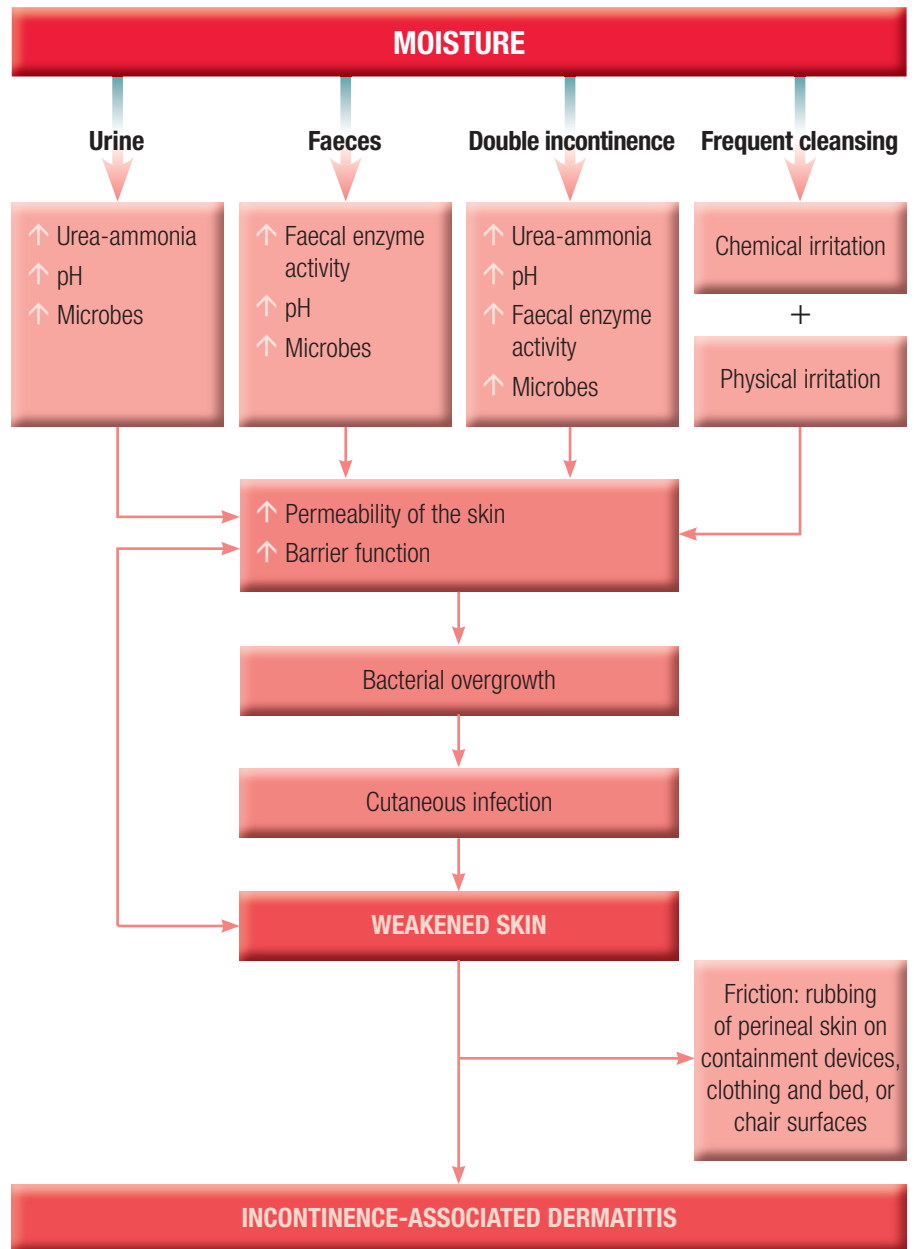


Figure 3. Aetiology of IAD.

Source: based on Jeter and Lutz (1996); Newman et al (2007) and Beekman et al (2009).

to mechanical forces, such as friction and shear, the skin can break down more quickly (Langemo et al, 2011).

### IAD and pressure ulcers

It is important to be able to determine the difference between IAD and superficial pressure ulcer development (Grade 1 and 2) (European Pressure Ulcer Advisory Panel [EPUAP], 2001). Confusion between IAD and

pressure ulcers can lead to the inappropriate use of limited resources and suboptimal care (Beekham et al, 2009).

It is, therefore, essential that when clinicians are trying to identify the cause of skin breakdown they perform a full review of the clinical evidence, including the location of any skin breakdown, the patient's risk factors and any symptoms present (Beekman et al, 2010).



Figure 4. Clearly defined area of pressure across the buttocks.

Pressure ulcers are generally located over a bony prominence such as the coccyx, whereas IAD tissue breakdown can occur anywhere in the perianal area. Pressure ulcers also tend to be localised to one spot, involving partial or full thickness tissue loss, with defined wound margins (Figures 4 and 5).

IAD on the other hand, involves moisture and any tissue involvement is superficial in nature involving the epidermis and the upper dermal layer. This usually covers a large area of skin and is



Figure 6. IAD will usually cover a large area.



Figure 5. Multiple Grade 2 pressure ulcers to the sacrum and buttocks.

not localised to one spot (Figure 6). The edges of the IAD lesions are usually irregular in shape and the surrounding tissue can often be red due to the irritant effects of the incontinence (Figure 7) (Defloor et al, 2005; Beeckman et al, 2008).

### Prevention of IAD

It is essential that when presented with a patient who is incontinent, clinicians take a full history and assessment to ensure that an effective treatment plan can be implemented (Bardsley, 2008).



Figure 7. The effects of urinary incontinence and poor hygiene prior to admission to hospital.

Any assessment should include:

- ▶▶ Relevant medical history
- ▶▶ Assessment of the patient's general physical condition
- ▶▶ In the case of an acute problem: clinicians should collect samples of urine, faeces or both and send for microbiological examination to determine if there is any infection, i.e. *Clostridium difficile*. If a sample has been taken, clinicians should ensure there is a full history including the reason for taking the sample, symptoms and any medications prescribed. This will help microbiologists in their analysis and diagnosis
- ▶▶ In the case of a chronic problem, any assessment should take note of any previous tests, examinations and the current management plan.

Regardless of whether the incontinence is an acute episode, which should resolve when treated, or a chronic condition that the patient has to learn to design his or her life around, it is



Figure 8. The impact of faecal incontinence on perianal and sacral areas.

important that an assessment, diagnosis and treatment plan is implemented.

The prevention of IAD is based upon:

- ▶▶ Routine skin inspection
- ▶▶ Cleansing regime
- ▶▶ Skin protection
- ▶▶ Treatment and management of incontinence
- ▶▶ Education – patient and carers.

### Routine skin inspection

A full inspection of the skin should be carried out on admission to ensure that an effective prevention and treatment plan can be individualised to the patient's needs. This should be periodically reviewed during the patient's stay (Langemo et al, 2011). It is important that when the skin is inspected its condition is recorded within the patient's health records along with any interventions.

The type of incontinence present can affect the sexes differently – urinary incontinence will affect

the female's labia area, whereas in men it will irritate the area underneath the scrotum.

Faecal incontinence tends to affect the perianal region and in severe cases can spread to the thighs, presenting as a burn on initial appearance, or a red blistering reaction (Figure 8).

It is essential that a thorough examination of any skin folds is carried out as these areas are not only prone to excess moisture through sweating, but are also vulnerable to extensive tissue loss if contamination from incontinence is not identified.

The warm moist environment of a skin fold encourages bacterial and fungal colonisation (Figure 9), in particular candidiasis (thrush) (Langemo et al, 2011), therefore it is essential that this is treated.

### Skin cleansing

Historically, soap and water was the main cleansing agent of choice, however, over the last decade clinicians have moved away from this practice. This is due to ongoing awareness of the skin's properties.

The skin has an acid mantle, which has a pH of 4–6.8. This naturally acidic pH reduces the growth of bacteria. However, urine and faeces are alkaline and when they are combined with soap, which is also alkaline, this can increase the skin's pH encouraging bacterial growth (Korting and Braun-Falco, 1996). In addition, the surfactants found in soaps, when combined with water, increase the skin's permeability making it more

vulnerable to skin breakdown (Bale et al, 2004).

Therefore, when caring for a patient with incontinence it is essential to choose a cleanser that does not reduce the skin's moisture content but rather preserves or enhances it (Cooper and Gray, 2001). Products such as emulsions, foams or liquid sprays, which contain humectants such as glycerine, esters, lanolin or, cetyl-stearyl alcohol, as well as mineral oils, are useful as they can prevent the loss of natural moisture from the skin (Nix, 2006).

### Skin protection

It is important that all patients have their skin moisturised. A moisturiser is designed to hydrate the skin, preserving suppleness and enhancing the barrier function (Langemo et al, 2011). The active ingredients in moisture barrier creams include petrolatum, dimethicone, lanolin or zinc oxide. Barrier products can be placed into three broad categories.

### Generic skin protectors

These products generally have



Figure 9. This patient is both faecally incontinent and also presents with a viral complication.

either zinc oxide or paraffin as their base. They repel irritants and prevent them from penetrating the skin. They can, however, have limitations, for example, clogging the pores of protective garments and making skin inspection difficult due to their thick consistency (Penzer, 2008).

### Barriers

These products have been specifically designed for skin protection in incontinent patients. They come in various forms, including creams, liquid wipes, and sprays. When applied to the skin they apply a transparent coating, which prevents the active enzymes within urine and faeces from penetrating the skin. Manufacturers of these products supply clear guidance on the amounts that should be used and the frequency of application, which depends on the degree of incontinence.

### Antibacterial and anti-yeast products

These are products contain bacterial and/or yeast enzymes and are designed to protect the skin from incontinence. They usually come in a cream or ointment form (Penzer, 2008).

### Management of acute faecal incontinence

The impact of faeces on the skin can be catastrophic for the patient, both in terms of extensive IAD, and increased pain. Due to the extent and frequency of faecal incontinence, some patients may benefit from a more direct management approach where

the faeces is contained away from the skin.

Faecal management devices have existed for many years. These originally consisted of a pouch which was attached to the buttocks by a hydrocolloid wafer. These were successful if a seal could be obtained, but this was often difficult due to the very location where the device was to be applied.

This concept of faecal management has been advanced over the years and current systems consist of soft silicone tubes, which are directly inserted into the anus. A small balloon cuff is inflated, which holds the tube in place and faeces is collected in a containment bag (Ousey and Gillibrand, 2010). The device can be left *in situ* for 29 days. These devices can be very effective in terms of:

- ▶▶ Prevention of IAD
- ▶▶ Reduced pain
- ▶▶ Reduced nursing time
- ▶▶ Increased patient comfort
- ▶▶ Prevention of infection.

### Treatment of underlying incontinence

The ultimate goal for any clinician caring for a patient with faecal or urinary incontinence is alleviation and control of bowel/bladder function. However, this may not be possible, especially when caring for frail elderly patients where functional control does not exist or in the acute or critically ill patient. In these cases the aim is to manage the incontinence with disposable patient-worn body pads. These come in various

sizes depending on the volume of fluid expected. The super-absorbent materials absorb fluid and turn into a gel-like substance, which removes the fluid from the skin and prevents enzymes in the faecal and urinary matter reacting with the skin and causing IAD.

Changing soiled products regularly is essential, as is the use of an appropriate cleansing and skin barrier regime.

### Education

Education of clinicians and patients is essential in effectively managing and preventing IAD as is determining whether tissue breakdown is caused by pressure or incontinence.

If a clinician's organisation has a protocol for the prevention and management of pressure ulcers and incontinence management then these should be followed. Clinicians should also attend any associated educational sessions, but if none are available the support of colleagues and relevant specialists should be sought out to ensure that any practice is accurate and relevant to patients' needs.

### Conclusion

Urinary and faecal incontinence can have a significant impact on skin integrity. Inappropriate management can cause the skin to become excoriated and lead to large areas of IAD, which can be highly distressing to the patient due to pain and discomfort.

It is the role of any clinician to try and prevent this from

happening by ensuring that patients who presents with incontinence have access to the following:

- ▶▶ Full assessment of their incontinence and a management plan in place
- ▶▶ Routine skin inspection
- ▶▶ Appropriate and effective cleansing regime
- ▶▶ Appropriate skin protection
- ▶▶ Treatment and management of incontinence using body-worn pads or faecal management systems
- ▶▶ Education about IAD and its prevention, both for themselves and their carers.

Incontinence can be distressing for patients and it is the role of clinicians to treat them with care and dignity. It is also the role of clinicians to be aware of the implications of incontinence and its impact on skin integrity. Only then can the pain and discomfort associated with IAD be prevented. **WE**

Bardsley A (2008) An introduction to faecal incontinence. *Continence Essentials* **1**: 110–16

Bale S, Tebble N, Jones V, Price P (2004) The benefits of implementing a new skin care protocol in nursing homes. *J Tissue Viability* **14(2)**: 44–50

Beeckman D, Schoonhoven L, Boucqué H et al (2008) pressure ulcers: e-learning to improve the classification by nurses and nursing students. *J Clin Nurs* **17(13)**: 1697–1707

Beeckman D, Schoonhoven L, Verhaeghe S, Heyneman A, Defloor T (2009) Prevention and treatment

of incontinence-associated dermatitis: literature review. *J Adv Nurs* **January**: 1141–54

Beeckman D, Defloor T, Verhaeghe S, Demarré L, Schoonhoven L, Vanderwee K (2010) What is the most effective method of preventing and treating incontinence associated dermatitis? *Nurs Times* **106(38)**: 22–4

Brown D, Sears M (1993) Perineal dermatitis: a conceptual framework. *Ostomy Wound Manage* **39(7)**: 20–5

Cooper P, Gray D (2001) Comparison of two skin care regimes for incontinence. *Br J Nurs* **10(6 Suppl)**: 6–20

Defloor T, Schoonhoven L, Fletcher F, et al (2005) *Statement of the European Pressure Ulcer Advisory Panel-Pressure Ulcer Classification: Differentiation Between Pressure Ulcers and Moisture Lesions*. *J Wound Ostomy Continence Nurs* **32(5)**: 302–6

EPUAP (2001) Guide to pressure ulcer grading. *EPUAP Review* **3(3)**: 75

Gray M (2004) Preventing and managing perineal dermatitis: a shared goal for wound and continence care. *J Wound Ostomy Continence Nurs* **31(1 suppl)**: S2–9

Jeter k, Lutz J (1996) Skin in the frail, elderly, dependant, incontinent patient. *Adv Wound Care* **9**: 29–34

Korting HC, Braun-Falco O (1996) The effect of detergents on skin pH and its consequences. *Clin Dermatol* **17**: 663–6

Langemo D, Hanson D, Hunter S, Thompson P, Oh IE (2011) Incontinence and incontinence-associated dermatitis. *Adv Skin Wound Care* **24(3)**: 126–40

Leyden JJ (1986) Diaper dermatitis. *Dermatol Clin* **4(1)**: 23–28

Newman DK, Preston AK, Salazar S, Sarshik S (2007) Moisture control, urinary and faecal incontinence, and perineal skin management. In: Krasner D, Rodeheaver GT, Sibbald RG et al (eds) *Chronic Wound Care: A Clinical Source for Healthcare Professionals*, 4th edn. HMP Communications Malvern: 609–27

NICE (2007) *Faecal Incontinence: the management of faecal incontinence in adults*. NICE, London

Nix D (2006) Skin matters: prevention and treatment of perineal skin breakdown due to incontinence. *Ostomy Wound Manage* **52(4)**: 26–28

Ousey K, Gillibran W (2010) Using faecal collectors to reduce wound contamination. *Wounds UK* **6(1)**: 86–91

Penzer R (2008) Best practice when applying topical barrier creams. *Continence Essentials* **1**: 28–32

Rees J, Pagnamenta F (2009) Best practice guidelines for the prevention and management of incontinence dermatitis. *Nurs Times* **105**: 36

Sibbald RG, Campbell K, Coutts P, Queen D (2003) Intact skin-an integrity not to be lost. *Ostomy Wound Manage* **49**: 27–33