

INCONTINENCE-ASSOCIATED SKIN DAMAGE: A CONCERN FOR NURSES

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Background

In 2005, a group of gerontologic, urologic, and wound ostomy and continence (enterostomal therapy) nurses met in Chicago to discuss trends in the care of incontinence-associated skin damage (Gray et al, 2007a).

The group met to review the literature, summarise current practice and provide recommendations for additional research. What we found surprised us. We knew research in this area was limited, but we were unable even to identify a consistent term describing incontinence-associated skin damage. A search of MEDLINE and CINAHL databases revealed that the most commonly used term, perineal dermatitis, appeared in only 19 articles published between January 1966 and February 2006. However, consensus among the conference participants was that the term perineum refers to a comparatively small area of skin between the vulva and anus in women and the scrotum and anus in men.

After prolonged discussion, the group formally proposed identifying this condition as incontinence-associated dermatitis (IAD). This term encompasses the skin response (inflammation) and the primary irritant, urinary or faecal incontinence, and it implicitly acknowledges that more than the perineal skin is at risk. IAD is now defined as one component of a larger cause of skin damage, labelled

moisture-associated skin damage (MASD) (Gray et al, 2007b). Other clinical manifestations of MASD include maceration of the periwound skin associated with prolonged contact with wound exudate and the various toxins created by bacteria within the wound bed, as well as intertrigo, dermatitis and secondary infection occurring in the skin folds.

Epidemiology

Evidence on IAD prevalence remains sparse, but recent research and clinical experience suggest that incontinence and moisture are significant risk factors for pressure ulcers. Junkin and Selekof (2007) studied the prevalence of incontinence-associated skin damage among hospitalised patients in the US and reported prevalence rates of 27% in one group of 976 subjects and 20% in a second group of 607 subjects.

Bliss et al (2006) reported a 6% prevalence in 10,215 nursing home residents. The authors acknowledged that this estimate is probably conservative, since the minimum data set used to determine prevalence does not require nurses to evaluate for IAD, possibly resulting in identification of many cases of IAD as stage I or Stage II pressure ulcers.

Aetiology and pathophysiology

Several recent studies provide initial insights into the causes and natural history of IAD. Bliss et al (2006) found that faecal incontinence and combined urinary and faecal incontinence were strong predictors of IAD, while urinary incontinence alone did not predict an increased risk. A recent febrile illness or multiple chronic conditions complicated by an acute illness also increased the risk.

Junkin and Selekof (2007) found an association between IAD and the use of absorptive incontinence products in 976 hospitalized patients. In a follow-up study involving 607 subjects the authors reported diminished prevalence when a polymer filled underpad was used to contain incontinence.

Houwing et al (2007) compared histopathologic samples from 14 subjects with incontinence-associated skin damage or pressure ulcers. They found evidence of ischaemia versus irritant-related inflammation, suggesting that IAD is pathophysiologically distinct from pressure-related skin damage.

Nevertheless, these lesions are closely related, and pressure ulcer risk assessment and preventive measures must not be ignored when IAD is diagnosed. Fader et al (2003) noted the close relationship between IAD and pressure ulcer risk when they compared the effects of two pad changing regimes on skin health in 81 residential care subjects. While subjects in both groups experienced erythema, elevated skin pH, and transepidermal water loss, the incidence of partial thickness pressure ulcers was higher in the group managed by less frequent pad changes, compared to those managed by more frequent pad changes.

Fader et al (2004) also observed that folds in pads significantly increased tissue-interface pressures compared to the pressures exerted when naked buttocks were positioned on a pressure redistribution surface.

Assessment

Assessment of IAD is often subsumed within an evaluation for pressure

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ulcers or pressure ulcer risk. Although pressure ulcer risk assessment tools often include an evaluation of incontinence or moisture, they are aimed at preventing pressure ulceration, not IAD. Differential diagnosis continues to rely primarily on visual inspection of the skin, the relationship between a lesion and bony prominences, and the presence of urinary, faecal or double incontinence (Gray et al, 2007a). Several assessment scales have been proposed, and a clinically useful scale for the evaluation of IAD is urgently needed.

Prevention

Prevention focuses on a structured skin care regimen, incorporating routine gentle cleansing, moisturising and application of a skin protectant or moisture barrier (Gray et al, 2007a). The efficacy of this regime is supported by a quasi-experimental study of 1,918 incontinent nursing home residents that compared four skin damage prevention regimens (Bliss et al, 2006).

Other studies have examined the effectiveness of structured skin care regimes designed to prevent perineal skin injury (Clever et al, 2002; Hunter et al, 2003; Bale et al, 2004), but none were limited to patients with incontinence and none examined IAD alone as the primary outcome.

Limited evidence suggests that soap and water may not be ideal for use in the case of frail elderly patients (Lewis-Byer and Thayer, 2002), but a definitive clinical trial comparing soap and water to no-rinse perineal cleanser has not been conducted.

Emerging evidence also suggests that gentle cleansing with a disposable soft cloth may protect the moisture barrier of the skin more effectively than a traditional hospital wash cloth (Clever et al, 2002). The optimal choice for a skin protectant has not yet been determined. An acrylate terpolymer-based alcohol-free barrier film may provide more cost-effective protection than petrolatum, zinc oxide or dimethicone-based ointment (Bliss et al, 2006).

Treatment

Treatment is aimed at protecting the skin from further exposure to irritants, eradicating cutaneous candidiasis (found in approximately one in five patients with IAD) (Junkin and Selekof, 2007), and establishing a healing environment that prevents further skin damage and enables eroded and inflamed skin to repair.

Little evidence exists to support the efficacy of most interventions, resulting in ongoing differences in expert opinion and clinical practice patterns. Clinicians tend to recommend a structured skin care regimen (Gray et al, 2007a). For example, Balsam Peru, castor oil and trypsin in an aluminum-magnesium hydroxide stearate ointment can act as a skin protectant that also promotes healing (Gray and Jones, 2004).

Why should I care?

IAD evaluation and management are essential components of nursing practice, whether you are a continence adviser, tissue viability nurse or wound care specialist.

As part of the Continence UK event being held in Harrogate, we would like to invite you to attend a presentation on incontinence-associated skin damage. This free presentation will take place from 6.30pm on the 12 November in the King's Suite at the Harrogate International Centre. It is open to all interested healthcare professionals, irrespective of whether they are delegates to the main Continence UK event. Clinician attendees will hear more about emerging evidence on the prevalence of IAD, its relationship to pressure ulcer risk, prevention and management techniques.

Researchers will also be able to hear the latest ongoing debates concerning epidemiology, aetiology and pathophysiology, and access information about the optimal approach for prevention and treatment.

To receive further information and registration details for this free presentation, please email info@continence-uk.com or call 01923

802154. I look forward to meeting you in Harrogate. **CUK**

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