Targeting Incontinence-Associated Dermatitis – A Leading Risk Factor for Pressure Ulcers

US hospitals no longer paid for pressure ulcers – fecal incontinence increases pressure ulcer risk by 22X!

Joan Junkin, MSN,RN,CWOCN

Introduction

Incontinence-associated dermatitis (IAD) is characterized by skin inflammation resulting from exposure to urine and/or feces as a result of incontinence. IAD manifests as skin redness with or without blistering, erosion, or loss of the skin barrier function and is a painful condition that begins with a simple maceration but can progress to severe inflammation with continued exposure.[1]

- Incontinence is a common problem in hospitalized acute care patients; the overall prevalence of fecal incontinence is 17.6%, and the associated rate of skin injury is 42.5%.[2]
- IAD increases pain and morbidity, and the risk of pressure ulceration in patients who are fecally incontinent and immobile is 37.5 times that in patients who are not. [3]

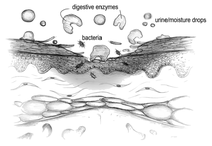
A major problem associated with IAD is mistaking it for pressure injury, which results in the wrong care plan being initiated. It is important to define IAD and distinguish it from pressure ulcers for reporting purposes and so that the correct decisions are made concerning patient care.

- The effective prevention and treatment of IAD differs from that of pressure ulcers, and the accurate identification of IAD can result in cost savings through a more focused problem-specific approach and more accurate reports of prevalence and incidence.

Getting Started Kit: Prevent Pressure Ulcers

How-to Guide

The 5 Million Lives Campaign, sponsored by the Institute for Healthcare Improvement (IHI), seeks to reduce patient harm. One of the goals of this campaign for 2007 and 2008 is to reduce the incidence of pressure ulcers. The IHI has issued recommendations for appropriate incontinence care, which include keeping patients dry, cleansing the skin with a mild cleansing agent to minimize irritation and dryness, and applying a topical moisture barrier to protect the skin against further exposure to urine and/or feces.[4] The IHI recommends using pre-moistened, disposable barrier cloths to cleanse, moisturize, deodorize, and protect the patients' skin after each incontinence episode.[4] Soap and water, which are commonly used for cleanup after an incontinence episode, are inadequate for the care and prevention of IAD[5] because they strip the skin of natural oils and most soaps have an alkaline pH which puts skin at risk for secondary infection with fungus and bacteria.



Skin Structure and Moisture Damage

Purpose

Bliss et al[6] have described a skin care regimen that involves the use of a cleanser and that provides a moisture barrier. This regimen reduced the rate of IAD in nursing home patients and reduces the costs associated with incontinence care.[6] However, this regimen is only useful if the health care staff are able to accurately identify IAD.

- **We developed a visual tool that helps to identify IAD, assess the severity of IAD, and determine the appropriate intervention for the treatment of IAD.**

Incontinence-Associated Dermatitis Intervention Tool (IADIT)

Skin Care for Incontinent Persons

1. Cleanse incontinence ASAP and apply barrier.
2. Document condition of skin at least once every shift in nurse's notes.
3. Notify primary care provider when skin injury occurs and collaborate on the plan of care.
4. Consider use of external catheter or fecal collector.
5. Consider short term use of urinary catheter only if necessary.

	Definition	Intervention
HIGH-RISK	Skin is not erythematous or warmer than nearby skin but may show scars or color changes from previous IAD episodes and/or healed pressure ulcer(s). Person not able to adequately care for self or communicate need and is incontinent of liquid stool at least 3 times in 24 hours.[1]	1. Use a disposable barrier cloth containing cleanser, moisturizer and protectant.[2] 2. If barrier cloths not available, use acidic cleanser (5.5 or lower), **not soap** (soap is too alkaline); cleanse gently (soak for a minute or two – **no scrubbing**); and apply a protectant (ie: dimethicone, liquid skin barrier or petrolatum). 3. If briefs or underpads are used, allow skin to be exposed to air. Use containment briefs only for sitting in chair or ambulating – not while in bed. 4. Manage the cause of incontinence: a) Determine why the patient is incontinent. Check for urinary tract infection, b) Consider timed toileting or a bladder or bowel program, c) Refer to incontinence specialist if no success.[3]
EARLY IAD	Skin exposed to stool and/or urine is dry, intact, and not blistered, but is pink or red with diffuse (not sharply defined), often irregular borders. In darker skin tones, it might be more difficult to visualize color changes (white or yellow color) and palpation may be more useful. Palpation may reveal a warmer temperature compared to skin not exposed. People with adequate sensation and the ability to communicate may complain of burning, stinging, or other pain.	
MODERATE IAD	Affected skin is bright or angry red – in darker skin tones, it may appear white or yellow. Skin usually appears shiny and moist with weeping or pinpoint areas of bleeding. Raised areas or small blisters may be noted. Small areas of skin loss (dime size) if any. This is painful whether or not the person can communicate the pain.	↑ ***Include treatments from box above plus:*** 5. Consider applying a zinc oxide-based product for weepy or bleeding areas 3 times a day and whenever stooling occurs. 6. Apply the ointment to a non-adherent dressing (such as anorectal dressing for cleft, Telfa for flat areas, or ABD pad for larger areas) and gently place on injured skin to avoid rubbing. Do not use tape or other adhesive dressings. 7. If using zinc oxide paste, **do not scrub the paste completely off** with the next cleaning. Gently soak stool off top then apply new paste covered dressing to area. 8. If denuded areas remain to be healed after inflammation is reduced, consider BTC ointment (balsam of peru, trypsin, castor oil) but remember balsam of peru is pro-inflammatory. 9. Consult WOCN if available.
SEVERE IAD	Affected skin is red with areas of denudement (partial thickness skin loss) and oozing/bleeding. In dark skinned patients, the skin tones may be white or yellow. Skin layers may be stripped off as the oozing protein is sticky and adheres to any dry surface.	↑ ***Include treatments from box above plus:*** 10. Position the person semiprone BID to expose affected skin to air. 11. Consider treatments that reduce moisture: low air loss mattress/overlay, more frequent turning, astringents such as Domeboro soaks. 12. Consider the air flow type underpads (without plastic backing).
FUNGAL APPEARING RASH	This may occur in addition to any level of IAD skin injury Usually spots are noted near edges of red areas (white or yellow areas in dark skinned patients) that may appear as pimples or just flat red (white or yellow) spots. Person may report itching which may be intense.	Ask primary care provider to order an anti-fungal powder or ointment. Avoid creams in the case of IAD because they add moisture to a moisture damaged area (main ingredient is water). 1. If using powder, lightly dust powder to affected areas. Seal with ointment or liquid skin barrier to prevent caking. 2. Continue the treatments based on the level of IAD. 3. Assess for thrush (oral fungal infection) and ask for treatment if present. 4. For women with fungal rash, ask health care provider to evaluate for vaginal fungal infection and ask for treatment if needed. 5. Assess skin folds, including under breasts, under pannus, and in groin. 6. If no improvement, culture area for possible bacterial infection.

Copyright © 2008 Joan Junkin. All rights reserved. Please send request for permissions to IADIT@medbiopub.com.

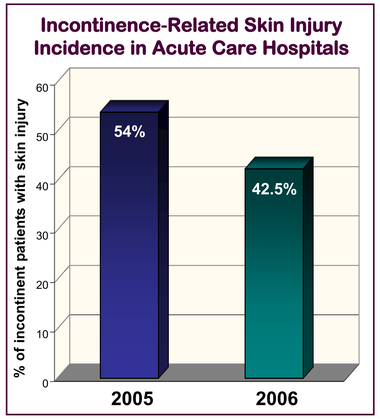
1. Bliss DZ, Zehrer C, Savik K, et al. Incontinence-Associated Skin Damage in Nursing Home Residents: A Secondary Analysis of a Prospective, Multicenter Study. *OstWound Mgmt.* 2006;52:46–55.
2. Institute for Healthcare Improvement. Prevent Pressure Ulcers: How-To Guide. May 2007. Available at: http://www.ihi.org/ihi/topics/5abab051-93b3-4d88-ae19-be89b7d96858/0/pressureulcerhowtoguide.doc, accessed 10/21/07.
3. Gray M, Bliss DB, Ermer-Seltun J, et al. Incontinence-associated Dermatitis: A Consensus. *JWOCN.* 2007;34:45-54.

Methods

Inpatient surveys were conducted, excluding obstetric and most psychiatric patients; geriatric psychiatry patients were included. The results were published, and peer-reviewed efforts ensued to create a visual tool to assist with the identification, classification, and appropriate treatment of IAD.

Results

In 2005, 198 of 976 inpatients were identified as incontinent; 54% of these patients had a skin injury in the area exposed to urine and/or feces. In 2006, 120 of 608 inpatients were incontinent; 42.5% of these patients had a skin injury in the area exposed to urine and/or feces.



After the publication of the above IAD incidence results, a visual tool was developed that involved:

1) conducting a systematic literature review of the various definitions and stages of IAD;
2) reviewing the evidence and comparing IAD tools;
3) assembling appropriate pictures, definitions, and interventions dependent on the stage of IAD;
4) using a peer-reviewed process, developed by industry experts, concerning the appropriateness of the tool; and
5) incorporating peer-reviewed commentary as appropriate to enhance the validity of the tool.

Discussion

The initial findings indicated that IAD is very common. In response to this finding and because many health professionals lack the knowledge to accurately differentiate between pressure injury and IAD, a visual tool was developed that provides a simple and accurate means of identifying, classifying, and treating IAD. The tool recommends the use of an all-in-one barrier to prevent IAD. This recommendation is based on IHI guidelines and on the proven effectiveness of such a barrier.[6]

Conclusions

- **IAD is very common in incontinent patients and is a painful and disabling condition.**
- **It is important to differentiate between IAD and pressure injury because the protocols for prevention and treatment of the two conditions are different.**
- **The failure to accurately differentiate between IAD and pressure ulcers may adversely affect patient outcomes and result in reporting errors.**
- **The tool includes suggestions for evidence-based prevention and care, including the use of all-in-one barrier cloths that clean, moisturize, and protect the skin against IAD which may result from ongoing exposure to urine and/or feces.**
- **A peer-reviewed visual tool was developed to make it easy for health care staff to identify, stage, and treat IAD.**
- **The visual tool presents interventions for each level of severity of IAD using definitions developed from the literature.**
- **If your facility desires to utilize this tool, please send an email to IADIT@medbiopub.com to obtain copyright permission and give your input as the tool is revised to become clinically relevant.**

References

1 Gray M, Bliss DZ, Doughty DB, et al. Incontinence-associated dermatitis: a consensus. *J Wound Ostomy Continence Nurs.* 2007;34:45-54.
2 Junkin J, Selekof JL. Prevalence of incontinence and associated skin injury in the acute care inpatient. J Wound Ostomy Continence Nurs. 2007;34:260-269.
3 Makelbust JA, Magnan MA. Risk factors associated with having a pressure ulcer: a secondary data analysis. *Adv Wound Care.* 1994;7:25-42.
4 Institute for Healthcare Improvement. Getting started kit: Reduce methicillin-resistant staphylococcus aureus (MRSA) infection how-to guide. ©2007 Institute for Healthcare Improvement. Available at: www.ihi.org/IHI/Programs/Campaign. Accessed January 5, 2008.
5 Hodgkinson B, Nay R, Willson J. A systematic review of topical skin care in aged care facilities. *J Clin Nurs.* 2007;16:129-136.
6 Bliss DZ, Zehrer C, Savik K, et al. An economic evaluation of 4 skin damage prevention regimens in nursing home residents with incontinence: economics of skin damage prevention. *J Wound Ostomy Continence Nurs.* 2007;34:143-152.