Differentiating Incontinence Associated Dermatitis from Category/Stage II Pressure Ulcers

Suzanne Collins, MS BSN RN CWOCN
Mid Atlantic Region Clinical Specialist
Mölnlycke Health Care
Pre-Test:

1. What is the most important intervention in pressure ulcer reduction?

2. What does ‘IAD’ stand for?

3. Who is responsible for reducing pressure ulcer incidence?

4. Is there a link between IAD and pressure ulcers?
Why is This Important?

• Hospital-acquired pressure ulcers are “never events” in acute care: Stage/Category III and IV wounds are not reimbursed at the higher diagnostic-related group for the costs of their care, and affect the hospital’s standing in nursing-sensitive quality indicators. These wounds can be serious injuries that lead to death!\(^1\)

• Incontinence-associated dermatitis can lead to inflammation, erosion, and secondary infection!\(^2\)
And Let’s Not Forget…

- Patients with incontinence-associated dermatitis can develop a pressure ulcer because excessive moisture reduces the skin’s tolerance to excessive pressure!³
Pressure Ulcer Snap Review:

Remember that pressure ulcers usually occur over bony prominences. Can you identify these?
Snap Review: Definition of a Pressure Ulcer--

- A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated (National Pressure Ulcer Advisory and European Pressure Ulcer Advisory Panel, 2009)

  - Pressure compresses tissue and blood vessels, hindering oxygen and nutrient delivery, leading to tissue death

  - Shear deforms adipose and muscle tissue, and disrupts blood flow when one layer of tissue slides horizontally over another layer⁴
Snap Review: Category/Stage I

- Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; it’s color may differ from the surrounding area.
Snap Review: A Bit More on Category/Stage I

• ...and furthermore, the area may be painful, firm, soft, warmer, or cooler as compared to adjacent tissue. May indicate “at risk” persons. Stage I pressure ulcers may be difficult to detect in individuals with dark skin tones.

Photos: Dot Weir
Snap Review: Category/Stage II

- Partial-thickness loss of dermis presenting as a shallow, open ulcer with a red pink wound bed, without slough. Stage II pressure ulcers may also present as an intact or open/ruptured serum-filled or serosanguineous-filled blister.
Snap Review: A Bit More on Category/Stage II

- Stage II presents as a shiny or dry shallow ulcer without slough or bruising. This stage should not be used to describe skin tears, tape burns, perineal (incontinence-associated) dermatitis, maceration, or excoriation.\(^6\)

Pop Quiz: What’s going on here?

Photo: WOCN image gallery
Snap Review: Category/Stage III

- Full thickness tissue loss. Subcutaneous fat may be visible, but bone, muscle or tendon are not exposed. Some slough may be present. Category/Stage III pressure ulcers may include undermining and tunneling.
Snap Review: Category/Stage IV

- Full thickness tissue loss with exposed bone, tendon, or muscle. These ulcers often include undermining and tunneling.

Photo: NPUAP with permission
So, What is Incontinence-Associated Dermatitis?

• Simply put, IAD is a skin irritation that results from urinary and/or fecal incontinence

• A more complete definition is “Inflammation and skin erosion associated with exposure to urine and/or stool, the use of absorptive containment devices, in which secondary cutaneous infection (usually fungal) is common”\textsuperscript{7}
How Tissue Loss Happens in IAD

- Exposure to urine: keratinocytes (skin cells) absorb urine, swell, and can no longer provide a barrier.
- Ammonia in urine raises skin’s pH, harming acid mantle, decreasing skin’s resistance to external forces.
- Exposure to stool: digestive enzymes denude the skin—they literally DIGEST it!
- Exposure to pressure and shear: ‘drag’ when moving patient, HOB elevated, inadequate turn intervals all create tissue ischemia, worsening skin integrity.
What are the Risk Factors for IAD?

• Neuro-related incontinence
• History of incontinence
• Use of briefs or pads that increase exposure to moisture
• Look for:
  – Skin that looks denuded in many areas
  – Red ‘flaring’ on the edges of the area of breakdown
  – Skin may smell of ammonia, even after cleansing

Photo: WOCN image gallery
...More IAD Risk Factors

• Intensity of irritant: liquid stool with or without urine
• Duration of contact: linen and/or mattress pad wet every two hours
• Perineal excoriation, denuded state, or dermatitis
• Low serum albumin, tube feedings, presence of *C. difficile*, or antibiotic therapy$^10$
What Does IAD Look Like?

• Location: buttocks, perineum and upper thighs

• Look:
  – Diffuse area of light to dark *erythema*
  – Deepening skin color in dark-skinned patients
  – Scaling of the skin
  – Papule and vesicle formation
  – Tissue ‘weeping’
  – Secondary yeast or bacterial infection: *red plaque with pinpoint satellite lesions that ‘burns,’* or *bright red, ‘very itchy’ areas*
Some Examples of IAD:

Photo: WOCN Image Library

Photo: WOCN image gallery

Photo: WOCN image gallery
IAD Complicated by Pressure

• “Hamburger Butt” is one way to describe this complicated wound

IAD Complicated by Pressure, Fungal, and Bacterial Infection

- Well, what would YOU call it?

Wound Management Challenge

• What do you think this is?

• How would you manage it?

66 year old Caucasian female, immune suppressed secondary to chemotherapy for ovarian CA. Fecal and urinary incontinence. Foley to manage the urine. Moisture barrier ointment with dimethicone applied heavily to the affected area gave pain relief because the nerve endings were covered, and protected the lesions from fecal incontinence.
What About Yeast (Candidiasis)?

• Risk factors:
  – Warm body areas
  – Moist skin folds
  – Hard-to-clean skin folds
  – Obesity
  – Antibiotic therapy
  – History of incontinence

Remember: skin may have bacterial AND yeast infection!

Photos: WOCN image library
### So, What’s the Difference Between IAD and Pressure Ulcers?¹¹

<table>
<thead>
<tr>
<th></th>
<th>IAD</th>
<th>Pressure Ulcers</th>
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</thead>
<tbody>
<tr>
<td><strong>Location:</strong></td>
<td>Diffusely distributed, skin folds</td>
<td>Oval or round, over pressure areas/bony prominences</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Red or bright red</td>
<td>Red or purple</td>
</tr>
<tr>
<td><strong>Depth:</strong></td>
<td>Partial thickness</td>
<td>Partial or full thickness</td>
</tr>
<tr>
<td><strong>Necrotic Tissue:</strong></td>
<td>None</td>
<td>Slough or eschar if full thickness</td>
</tr>
<tr>
<td><strong>Symptoms:</strong></td>
<td>Pain or itching, with history of incontinence</td>
<td>Pain or itching, not necessarily with a history of incontinence</td>
</tr>
</tbody>
</table>
So, This:

IAD: Diffusely distributed, in skin folds, red or bright red, without slough or necrotic tissue, causing pain and/or itching. There is always history of incontinence!
Or This...

Category/Stage II pressure ulcer: **usually** oval or round, over a bony prominence, red or purplish, and partial thickness.
What if there’s **slough**?
What if it’s **purple**?

Photos: Dot Weir
Hey, Wait A Minute: What About That 3rd Photo?

- **Special point:** When a patient has been supine for an extended period, pressure ulcers can occur on the cheeks of buttocks.
- This happens when the patient was positioned flat.
- These can be Deep Tissue Injuries.
- Show as single wounds with distinct edges.

Photo: Courtesy of Elliott Douglas, VUMC
Deep Tissue Injuries?

• Yes! Remember that DTI is a pressure ulcer Category/Stage.
• DTI leads to epidermal loss at about 48 hours from injury\(^1\)
• The bed of the ulcer is dark and usually purple
• There is usually no history of incontinence!\(^2\)

Photo: NPUAP with permission
Pressure Ulcers That Are Associated With Moisture:

- Usually due to pressure on moisture-damaged skin
- Usually found on the pelvis
- Necrotic tissue IS often present
- Exudate is common, but may be ‘hidden’ by stool or urine if patient is incontinent
- May become infected
- Associated with malnutrition (especially low protein)

Photo: NPUAP with permission
So, What Do We Do?

• **Determine the cause** of the incontinence!
  
  – **Acute** urinary incontinence:
    
    • often from a UTI
    • post-menopausal women
    • history of instrumentation,
    • Catheterization
    • women recently sexually active-
Determine the Cause, contd.

– **Chronic urinary incontinence:**
  - colonized urine
  - elders with cognitive problems
  - patients with mobility problems
And, Of Course--

- Keep skin clean and dry, and use skin protectant
- Watch for infectious forms of diarrhea
- Consider side-effects of medications or tube feedings as cause of diarrhea
- Immediately treat fungal skin infection
- Consider Foley catheter if skin denudement severe
- Use containment products carefully
And Also...

- Consider fecal collector for frequent diarrhea
- Monitor for dehydration, which can worsen incontinence
- Consult MD/WOCN/NP for evaluation for fecal management system if diarrhea is high-volume and greater than 6 stool episodes per day
Protect the Skin!

- Avoid plastic or rubberized drawsheets on low air-loss beds
- Keep incontinence care products at the bedside
- Keep skin moisturized
- Avoid use of abrasive wash cloths
- Use effective barrier cream after each exposure
- Avoid zinc oxide, as it can damage skin to remove
- Consider bowel management system if diarrhea meets criteria for use and patient care setting\textsuperscript{13}
Protect the Wound!

- **Isolate any wound** from contact with incontinence.
- **Use a waterproof dressing** if possible to prevent contamination of wound and wound breakdown from excessive moisture.
- If necessary, **seal edges of dressing** with waterproof liquid skin barrier to reduce chance of leaking into dressing.
- Wipe stool or urine off waterproof dressing **rather than change** each time patient is incontinent.
Intended Use

- Designed for a wide range of exuding wounds such as sacral pressure ulcers.
- Can also be used on dry or necrotic wounds in combination with gels.
Manufactured in Silver-Ion Releasing Form to Provide Antimicrobial Effect

Several other versions of sacral foam dressings available to address complex sacral wound management challenges
Absorbent Bordered Soft Silicone Dressings

Photos: Dunbar, A. et al. SAWC Poster, 2006 and MHC, data on file
Post-Test

1. Name two differences between IAD and a Category/Stage II pressure ulcer
2. What is the Number One most important thing to do to prevent a pressure ulcer?
3. Name two effects that incontinence has on the skin, either urinary or fecal
4. Urinary incontinence is often a sign or signal of:

__________________
1. IAD skin breakdown is ALWAYS found when the patient is incontinent; pressure ulcers are not necessarily
2. Reduce pressure
3. Swells keratinocytes, increases friction and shear between skin and surface, can expose skin to enzymes, etc
4. Urinary tract infection
Thank you!

Any questions?
References:


3. Ibid.

4. Ibid.


6. Ibid. #2.


9. Ibid., No. 7.


13. Ibid. #11