Incontinent Dermatitis??
Or is it a Pressure Ulcer??

YOUR SKIN
Largest organ of the body
Covers more than 20 square feet on an average adult
Very important organ
Personal Security System
Protection System - has a protective acid mantle which serves to maintain normal skin flora
Barrier - Diseases & Infection

EPIDERMIS
Outermost layer
Tough outer coat
Prevents Dehydration
Continuously being restored
Continuously shedding its cells through wear & tear of daily activity
First line of defense

THE DERMIS
Dense connective tissue
Contains Collagen - Healing
Supports Epidermis - Conforms to muscles/bones
Thicker than Epidermis
Network of blood vessels & nerves
Metabolic support, temperature regulation and immune surveillance
It's your cooling system

ADIPOSE TISSUE LAYER
Bottom layer - under the dermis
Fat Storage
Thermal insulation
Mechanical cushioning - shock absorber
Retards loss of body heat - cold weather

ADULTHOOD - SKIN CHANGES
Tensile strength - good
Cellular Growth - normal
Gradual changes:
- Dermis thickness - dec
- Wound Healing takes longer
- Barrier Function - starts to reduce
- Epidermis firmly resting on dermis - thick layer
ADULTHOOD-SKIN CHANGES

- Sensory Receptors - start to diminish
- Vitamin D Production - dec
- Inflammatory-healing response - dec
- Wrinkling and Sagging of the skin begins

ELDERLY-SKIN CHANGES

Skin Texture Changes
- Inc. Capillary Fragility
- Inc. Subcutaneous hemorrhages
- Inc. Wrinkling/Sagging
- Inc. Sensitivity
- Inc. in Pigmentation
Skin - thinner - transparent - "tissue paper"

ELDERLY-SKIN CHANGES

- Dec. Tensile Strength
- Dec. Sweat Gland output
- Dec. in New Skin Formation
- Dec. Elasticity
- Dec. Turgor
- Delayed Healing
- Vulnerability to Incontinent Associated Dermatitis

Incontinent Dermatitis Defined:

Many different term used to describe Incontinent Dermatitis
1. Dermatitis
2. Perineal dermatitis
3. Irritant dermatitis
4. Contact dermatitis
5. Moisture associated dermatitis
6. Heat Rash
7. Diaper Rash

Broader term was developed to identify the dermatitis and the preferred term is Incontinent Associated Dermatitis (IAD).

Term determined by Consensus Conference of Clinical Experts.

Incontinent Associated Dermatitis (IAD)

Identifies the cause of the dermatitis.
Incontinent - characterized by duration/frequency of moisture exposure from incontinence of:
1. Urine/stool,
2. High volume diarrhea,
3. Perspiration,
4. Wound exudate,
5. Mucus or

Dermatitis - acute or chronic inflammation of the epidermis and dermis. Often extends far beyond the perineum area - can continue in to the peri-genital area, peri-anal area and upper inner thighs and outer thighs - up as far as the coccyx on some people

Erosion - thought to begin as isolated islands that may extend into the epidermal and sometimes into the dermal skin layers - leading to denuding of the areas

Denuded - Partial Thickness skin loss
Loss of epidermal layer of skin usually associated with moisture

Excoriation - abrasion of the skin - often used to refer to erosion or destruction of the skin

• Excessive moisture reduces the skin’s tolerance/strength against pressure and pressure ulcers can happen quicker
Incontinent Associated Dermatitis (IAD)

**Risk Factors for IAD**

- Incontinence of fecal more than urine – because of the enzymes in the stool
- Frequency of incontinence (chronic)
- Prolonged exposure to various moisture (urine, stool, wound, mucous, saliva, or sweat)
- Length of exposure to moisture
- Poor skin condition
- Compromised mobility
- Moister warm skin folds
- Hard to clean skin folds - deep creases (gluteal area, belly folds, thigh creases)
- Favers – Antibiotic therapy
- Increased moisture loss (abnormal sweating, wound drainage)
- Mechanical stresses (friction and shear)
- Advanced age – changes in the skin of the elderly

**Etiology**

- Originally occurs as inflammation of the skin
- Bright (redness) erythema
- Darker tone skin (more subtle reddish hue)
- Erosion of the skin happens with continued exposure to the moisture source
- Erosion – partial thickness (through the epidermis) not the dermis in the beginning
- Full-thickness usually associated with addition of friction/shearing and pressure

**Etiology con’t**

- Moisture + irritating substances (urine) + prolonged time = damage
- Urine – alters the normal skin flora – increases permeability – overhydrates the damage
- Stool has enzymes + contributes to skin damage
- Stool bacteria + increased risk of secondary infection (yeast)
- High volume diarrhea = high enzymes = more damage to the skin
- Use of cheap briefs or pads that increase exposure to moisture
- Prolonged occlusion of skin under absorptive incontinence products = increased sweat = high risk for skin breakdown

Prolonged exposure or exposure multiple times before the skin can fully repair itself = vicious cycle = damage from long term exposure to irritants such as urine and stool

The Facility must become a incontinent detective!
You must discover those high risk patients - then protect them!!
What is Incontinence-Associated Dermatitis?

- Skin irritation that results from urinary and/or fecal incontinence
- Inflammation and skin erosion
- Associated with exposure to urine and/or stool
- Use of absorptive containment devices (diapers)
- Secondary cutaneous infection is common (fungal)

Assessment

Focused History - cause of irritation??
Visual assessment of all areas of the body
1. Under breasts
2. Under pannus
3. Peri-genital skin - scrotum - Labial folds
4. Between creases - abdominal, back, between buttocks folds, perineal creases, thigh creases, upper thighs, peri-anal area, sacral area, groin, buttocks
5. Peri-wound
6. Peri-stomal
7. Groin
Complaints of burning - stinging - tingling - itching - pain
Itching of the skin (when Candidiasis is present)

Dark skin - minor/early skin damage — may be under-identified — poor detection — lead to more severe dermatitis — purplish/bluish discoloration — erythema/ color change or discoloration
Go back to Etiology — possible cause - multiple causes

Were adequate and timely interventions documented?
May need to be written as q 2 hr diaper checks
Better quality diapers
Protective Ointments with everyone in diapers whether red or not
Routine incontinent checks
Protective Ointments may need to be written on the MAR and checked off

What can you do as a facility to make sure prevention happens?

Secondary Fungal Infections

- Frequently seen as a rash - bright to dull red rash
- Irregular edge and pinpoint red dots
- Damage may appear raised — May have purple hue in dark skin patients
- Dark red scaling rash — complaints of itching — smell of yeast

Must treat the fungal infection — fungal ointment/powder

Early Incontinent Associated Dermatitis

Moderate Incontinent Associated Dermatitis
Severe IAD

Add some Friction, or Shear, or Pressure to the damaged weakened tissue………………

The excessive moisture reduces the skin’s tolerance to friction or shear or pressure ………….resulting in full-thickness wounds that will go deeper.

Presence of yellow slough or necrotic tissue = pressure related skin breakdown and no longer is IAD ---- yet may have IAD to surrounding areas

Quick Review of Pressure Points

SUPINE POSITION

LATERAL POSITION

SITTING POSITION
Shearing

- Shear deforms adipose and muscle tissue, and disrupts blood flow when one layer of tissue slides horizontally over another layer.
- Friction and Shearing are co-factors of the formation of pressure ulcers - add on top of these co-factors - IAD which weakens the outer layer of skin and results in less time to form a pressure related skin breakdown than before.

Common characteristics between IAD and Pressure Ulcers

- IAD – skin damage from top down
- Pressure ulcers – bottom up damage
- IAD – no distinctive borders
- Pressure ulcers – distinctive borders
- Both --- may cause partial thickness wounds involving the epidermis and dermis
- Pressure Ulcers – present as full thickness wounds

Quick Review - Pressure Ulcers

- Localized injury to the skin and/or underlying tissue
- Usually over a bony prominence
- Result of pressure or pressure in combination with shear and/or friction
- Can have a number of contributing or confounding factors

Pressure compresses tissues and blood vessels - decreasing oxygen and nutrients to them - this leads to tissue death

Stage I

Intact skin with non-blanchable redness of a localized area usually over a bony prominence.

Darkerly pigmented skin may not have visible blanching, its color may differ from the surrounding area.

Further description:

The area may be painful, firm, soft warmer or cooler as compared to adjacent tissue.

Stage I may be difficult to detect in individuals with dark skin tones.

Stage I may indicate “at risk” persons (a heralding sign of risk).

Stage II

Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed.

May also present as an intact or open/ruptured serum-filled blister.

Further description:

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 dermatitis, maceration or excoriation.

*Bruising indicates suspected deep tissue injury.
**Stage II Pressure Ulcer**

Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.

Further Description:
The depth of a stage II pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue and stage II ulcers can be shallow.

In contrast, areas of significant adipose can develop extremely deep stage II pressure ulcers. Bone/tendon is not visible or directly palpable.

**Stage III**

Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.

Further Description:
The depth of a stage III pressure ulcer varies by anatomical location.

The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue and stage III ulcers can be shallow.

In contrast, areas of significant adipose can develop extremely deep stage III pressure ulcers. Bone/tendon is not visible or directly palpable.

**Stage IV**

Full thickness skin loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed.

Often include undermining and tunneling.

Further description:
The depth of a stage IV pressure ulcer varies by anatomical location.

The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue and these ulcers can be shallow.

Stage IV ulcers may extend into muscle and/or supporting structures (e.g. fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable.

**Stage IV Pressure Ulcer**

**IAD and Pressure Ulcers**

<table>
<thead>
<tr>
<th>IAD</th>
<th>Pressure Ulcers</th>
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</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Diffusely distributed, skin folds, creases, oral or nasal, over pressure areas/bony prominences</td>
</tr>
<tr>
<td>Color:</td>
<td>Red or bright red, purple hue, dusky discoloration with dark skin - May have redness with a rash, red or purple hue on dark skin</td>
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<tr>
<td>Depth:</td>
<td>Partial thickness, partial or full thickness</td>
</tr>
<tr>
<td>Necrotic Tissue:</td>
<td>None, yellow slough or eschar if full thickness</td>
</tr>
<tr>
<td>Symptoms:</td>
<td>Pain or itching, burning, tingling with history of incontinence, pain, warmth, mushy skin area or itching, not necessarily with a history of incontinence</td>
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If preventative measures recommended would have happened appropriately and timely then minimal skin breakdown and/or prevention of the deterioration in breakdowns should happen.

Legal Case
60 yr old new paraplegic – multiple stooling r/t use of antibiotics
WOCN ordered crusting (skin prep/stomalwse powder) – forms a crust
Cover with Calmoseptine
Applied multiple times throughout the day
Also:
Lack of Turning – Dec in nutrition – Loss of 40 pounds – very deconditioned
Sent to Rehab Department – upon examination – found under the crusting layer black necrotic tissue leading to Stage IV Pressure Ulcer
Went to Trial - sued original hospital - won 6.3 Million - largest settlement in Arizona History

Prevention and Management
Manage Incontinence!!
Prevent, Reduce Severity, Contain
1. Behavioral - Toileting program
2. Bowel regimen - Fluid and Diet management
3. Functional Factors - Work with mobility, toilet cleansing ability - Turning if unable
4. Containment/diversion devices
5. Absorbent products (quality diapers - right size/fit - low leakage - breathable materials - odor control - don't interfere with skin protectants - pads vs diaper)
6. Medications - Anticholinergics - Antispasmodics

Treatment Goals
Minimize contact with irritants (urine, stool and excessive moisture).
Interventions:
1. Cleanse perineal skin daily and after each incontinence episode using a non-rinse cleanser (soft cloth/adult wipes)
2. Avoid scrubbing the skin – use a soft or disposable cloth
3. Apply an appropriate skin protectant to minimize contact between urine and/or stool (ointments containing petrolatum, zinc oxide, dimethicone or combination of these products)
Educate caregivers to apply structured skin regimen and routinely assess for IAD.

Routinely
• Assess patient’s risk for IAD and reduce barriers to care
• Provide toileting substitutes such as commodes and urinals, minimize incontinence with scheduled toileting programs
• Consider use of devices for intractable incontinence. Devices must be selected carefully based on patient’s individual needs. Devices include: urethral inserts, anal plugs, introvaginal devices (pessaries), female and male urinary pouches, penile compression or urinary or fecal collection systems
• Educate staff about the necessity and principles for implementing skin care protocols that include cleansers, moisturizers and protectants daily and following each incontinent episode
• Use skin care products that cleanse, moisturize and protect.
References