Pressure Injury Prevention Project

Incontinence Associated Dermatitis (IAD) Best Practice Principles

Clinical Excellence Commission
May 2018
Aims

• To provide evidence based information to improve clinical knowledge about Incontinence Associated Dermatitis (IAD)
• To assist clinicians to differentiate between IAD and Pressure Injury (PI)
• To improve knowledge of appropriate IAD prevention strategies.
Best practice principles

The following slides are a summary of the Best Practice Principles

Note: Information applies to people 18 years and older

INCONTINENCE-ASSOCIATED DERMATITIS: MOVING PREVENTION FORWARD

Addressing evidence gaps for best practice

- Identifying causes and risk factors for IAD
- IAD and pressure ulceration
- IAD assessment and severity-based categorisation
- IAD prevention and management strategies

Proceedings from the Global IAD Expert Panel
What is IAD?

IAD is a type of irritant contact dermatitis (inflammation of the skin) found in people with faecal and/or urinary incontinence.

Terms that have been used for IAD include:

- Diaper/napkin/nappy dermatitis
- Diaper/napkin/nappy rash
- Irritant dermatitis
- Moisture lesions
- Perineal dermatitis
- Perineal rash
How many people are affected with IAD?

Data suggest IAD is a common problem in healthcare settings. Studies have estimated that it has:

- **Prevalence** (i.e. proportion of patients with IAD at a defined point in time) of 5.6% - 50%
- **Incidence** (i.e. proportion of patients who develop IAD over time) of 3.4% - 25%.
Recognising IAD

• In individuals with light skin, IAD appears initially as erythema which can range from pink to red

• In individuals with darker skin tones, skin may be paler, darker, purple, dark red or yellow

• The affected area usually has poorly defined edges and may be patchy or continuous over large areas
Recognising IAD (continued)

• IAD can cause discomfort, pain, burning, itching or tingling in the affected areas

• Pain may be present even when the epidermis is intact.

Depending on the extent of contact with urine and/or faeces, IAD may affect large areas of skin, not just the skin of the perineum
How does incontinence cause IAD

IAD represents disruption to the normal barrier function of the skin, which triggers inflammation.

Key mechanisms involved are overhydration of the skin and an increase in pH.
IAD & skin barrier function

• With exposure to urine and/or faeces, skin becomes more alkaline. This occurs because skin bacteria convert the substance urea (a product of protein metabolism found in urine) to ammonia which is alkaline.

• People with faecal incontinence +/- urinary incontinence are at higher risk of developing IAD than those with urinary incontinence alone.
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Faeces acts as a direct chemical irritant to the skin. Loose stools increase the risk and severity of IAD.
Does IAD contribute to PI development?

People vulnerable to skin injury from pressure and shear are also likely to be vulnerable to skin damage resulting from moisture, friction and irritants.

Incontinence is a risk factor for pressure injuries, but IAD can also occur in the absence of any other pressure injury-associated risk factors and vice versa.

IAD and PI can both be present.
Identifying patients at risk of IAD

**Type of incontinence:**
- Faecal incontinence (diarrhoea / formed stool)
- Double incontinence (faecal and urinary)
- Urinary incontinence

**Frequent episodes of incontinence**
(epecially faecal)

**Use of occlusive containment products**

**Compromised mobility**

**Inability to perform personal hygiene**
(especially cleaning after defecation)

**Pain**

**Medications**
(antibiotics, immunosuppressants)

**Critical illness**

**Poor skin condition**
(due to aging/steroid use/diabetes & others)

**Diminished cognitive awareness**

**Raised body temperature** (pyrexia)

**Poor nutritional status**
Identifying patients at risk of IAD

The presence of any urinary and/or faecal incontinence, even in the absence of other risk factors, should trigger implementation of an appropriate IAD prevention protocol to minimise/prevent exposure to urine and stool and protect skin.
IAD assessment

Assessment for IAD should be incorporated into a general skin assessment and performed as part of a pressure injury prevention/continence care program.

Inspect areas of skin that may be affected, including the perineum, perigenital areas, buttocks, gluteal fold, thighs, lower back, lower abdomen and skin folds (groin, under large abdominal apron, etc.) for:

- Erythema
- Maceration
- Signs of fungal or bacterial skin infection
- Erosion or denudation
- Presence of lesions (vesicles, papules, pustules, etc.)
IAD assessment & documentation

Document findings and any appropriate actions required in patient’s healthcare records

Assessment and documentation of continence status should also include deviations from normal bladder and/or bowel function and any follow-up actions
## IAD severity categorisation tool

<table>
<thead>
<tr>
<th>Clinical presentation</th>
<th>Severity of IAD</th>
<th>Signs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>No redness and skin intact (at risk)</td>
<td>Skin is normal as compared to rest of body (no signs of IAD)</td>
<td></td>
</tr>
<tr>
<td>Category 1 - Red* but skin intact (mild)</td>
<td>Erythema</td>
<td>+/-oedema</td>
</tr>
<tr>
<td>Category 2 - Red* with skin breakdown (moderate-severe)</td>
<td>As above for Category 1</td>
<td>+/-vesicles/bullae/skin erosion</td>
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<td></td>
<td></td>
<td>+/-denudation of skin</td>
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<tr>
<td></td>
<td></td>
<td>+/- skin infection</td>
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</table>

* Or paler, darker, purple, dark red or yellow in patients with darker skin tones

**If the patient is not incontinent, the condition is not IAD
Distinguishing IAD from pressure injury (PI)

It is often difficult for clinicians to correctly identify IAD and to distinguish it from PI (Stage 1 or 2).

If the person is not incontinent, the condition is not IAD

Correct assessment and diagnosis of IAD is important and necessary to ensure that:

• the person receives appropriate treatment
• documentation is accurate
• quality reporting can be facilitated.
## Distinguishing IAD from PI

<table>
<thead>
<tr>
<th>Parameter</th>
<th>IAD</th>
<th>Pressure injury</th>
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<tbody>
<tr>
<td>History</td>
<td>Urinary and/or faecal incontinence</td>
<td>Exposure to pressure/shear</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Pain, burning, itching, tingling</td>
<td>Pain</td>
</tr>
<tr>
<td>Location</td>
<td>Affects perineum, perigenital, peristomal area; buttocks; gluteal fold; medial and posterior aspects of upper thighs; lower back; may extend over bony prominence</td>
<td>Usually over bony prominence or associated with location of a medical device</td>
</tr>
<tr>
<td>Shape/edges</td>
<td>Affected area is diffuse with poorly defined edges/may be blotchy</td>
<td>Distinct edges or margins</td>
</tr>
</tbody>
</table>
| Presentation/depth | Intact skin with erythema (blanchable/non-blanchable), with/without superficial/partial-thickness skin loss | 1. Presentation varies from intact skin with non-blanchable erythema to full-thickness skin loss  
2. Base of wound may contain non-viable tissue |
| Other           | Secondary superficial skin infection (e.g. candidiasis) may be present | Secondary soft tissue infection may be present                                 |

Differentiation between IAD and pressure injury [adapted from Back et al, 2011 and Beeckman et al, 2011; published by Wounds International, 2015]
Distinguishing IAD from PI

Assessment relies on clinical observation and visual inspection. No bedside (point-of-care) technologies are available to aid in the assessment and diagnosis of IAD.

If the aetiology of erythema is not clear, a standard bundle of interventions for the management of both IAD and PI prevention should be implemented and reviewed to assess anticipated response.
Prevention & management of IAD

Key interventions that are critical for the prevention & management of IAD:

• Manage incontinence to identify and treat reversible causes (e.g. urinary tract infection, constipation, diuretics) to reduce, or ideally eliminate skin contact with urine and/or faeces

• Implement a structured skin care regimen to protect the skin exposed to urine and/or faeces and help restore an effective skin barrier function

• Appropriate use of pads containing super absorbent polymer.
Prevention & management of IAD

Prevention of IAD should be aimed at all incontinent people with the aim of promoting positive outcomes and avoidance of injury and harm.

There should be visible improvement in the skin condition and reduction in pain in 1–2 days following the implementation of an appropriate skin care regimen, with resolution within 1–2 weeks. For people who continue to have unresolved continence issues, seek advice from specialist continence advisors, where possible.
Prevention & management of IAD

Patient with urinary and/or faecal incontinence

Assess incontinence to identify reversible causes
Assess type and frequency of incontinence and other risk factors
Inspect the skin for signs of IAD (include skin folds) and perform differential diagnosis

If no signs of IAD
At risk*: No redness and skin intact
PREVENT IAD

If signs of IAD, categorise according to severity
Category 1: Red but skin intact
Category 2: Red with skin breakdown +/- skin infection
MANAGE IAD

MANAGE INCONTINENCE**
Assess and treat reversible causes of incontinence
Optimise nutrition, fluid management and toileting techniques
Implement pressure ulcer prevention plan

IMPLEMENT A STRUCTURED SKIN CARE REGIMEN
Perform the following at least once daily or after each episode of faecal incontinence
CLEANSE
Remove irritants from skin, i.e. urine and/or faeces
PROTECT
Place a barrier on the skin to prevent direct contact with urine and/or faeces
RESTORE when appropriate
Replenish the lipid barrier using suitable topical skin care product

REGULAR DOCUMENTED REASSESSMENT

* Patients with faecal incontinence +/- urinary incontinence are at a higher risk of developing IAD than those with urinary incontinence alone

** Refer for specialist advice if there is no improvement within 3-5 days or if a skin infection is suspected
Prevention & management of IAD

A skin cleanser with a pH range similar to normal skin is preferred over traditional soap. This should be labelled as being indicated or suitable for use in the management of incontinence.

Structured skin care regimens that incorporate gentle cleansing and the use of skin protectants have been shown to reduce the incidence of IAD. This may also be associated with a reduction in the development of Stage 1 PI.
Prevention & management of IAD

Implement a structured skin care regimen, key interventions:

• Cleansing the skin to remove urine and/or faeces, i.e. the source of irritants that cause IAD. This should be done prior to the application of a skin protectant as part of a routine process to remove urine and faeces

• Protecting the skin to avoid or minimise exposure to urine and/or faeces and friction.
Prevention & management of IAD

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<th>Patient with urinary+/faecal incontinence</th>
<th>ACTIONS</th>
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<table>
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<tr>
<th>CLEANSE*, PROTECT** &amp; RESTORE***</th>
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<tbody>
<tr>
<td>PREVENTION: select option 1 or 2</td>
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</tbody>
</table>
| 1. Continen
t care wipe (3-in-1: cleanser + skin protectant + moisturiser)  |
| ADD skin protectant (e.g. dimethicone-containing product) if extra skin protection is required |
| 2. Skin cleanser OR bathing/cleansing wipe PLUS |
| Skin protectant (e.g. acrylate terpolymer film or petrolatum-based product or dimethicone-containing product) |

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<th>MANAGEMENT: select option 1 or 2</th>
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</table>
| 1. Continen
t care wipe (3-in-1: cleanser + skin protectant + moisturiser)  |
| ADD skin protectant (e.g. acrylate terpolymer barrier film) if worsening erythema/skin condition |
| 2. Skin cleanser OR bathing/cleansing wipe PLUS |
| Skin protectant (e.g. acrylate terpolymer barrier film or dimethicone-containing product) |

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<tr>
<th>EDUCATE PATIENTS AND CAREGIVERS</th>
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<tr>
<td>As for Category 2 PLUS</td>
</tr>
<tr>
<td>Take a microbiological sample when possible and use result to decide on appropriate therapy (e.g. antifungal cream, topical antibiotic, anti-inflammatory product)</td>
</tr>
</tbody>
</table>

*Cleansing should take place daily and after each episode of faecal incontinence
**Skin protectants should be applied according to the manufacturer's instructions
***For skin that is overhydrated or where maceration is present, do not use skin care products that trap moisture or are formulated to attract moisture
Prevention & management of IAD

The expert panel recommends that the skin of people who are incontinent should be cleansed at least once daily and after each episode of faecal incontinence.

Clinicians and caregivers should check the ingredients of any product to be applied to the skin to ensure it does not contain any substance to which the person is sensitive or allergic and is indicated for use in people with incontinence.

A skin care product or combination product that has skin protective / restorative actions is recommended to prevent IAD in at risk people.
Too many layers cause lots of problems

• Increases friction and shearing
• Increases heat
• Increases moisture and prevents airflow
• Impairs microclimate
• Negates the effect of the active mattress
• Increases PI risk.

M. Barakat-Johnson, *The HAPI study*, SLHD and USyd
References


Questions?