

Incontinence associated dermatitis

Incontinence associated dermatitis (IAD) is common in residential aged care, affecting between 3.1 and 6.5 per cent of care recipients. Up to 25% of aged care residents will develop IAD over time. It is a form of irritant contact dermatitis due to contact with urine and faeces in people who are incontinent of urine and/or faeces. Erosion of the epidermis and maceration of the skin characterise IAD.

Incontinence is described as any accidental or involuntary loss of urine from the bladder (urinary incontinence) or faeces or flatus from the bowel (faecal incontinence) or both (double incontinence). Incontinence can range in severity from a small leak to complete loss of bladder or bowel control. A care recipient is incontinent when they experience incontinence at least once per day.

The Royal Commission into Aged Care identified that more than 70% of residents in aged care had urine or faecal incontinence, or both. Almost half of residents experience 3 or more urinary incontinence episodes daily, more than one-third experience 4 or more episodes a week of faecal incontinence.

Signs and symptoms

IAD may cause considerable discomfort with itching, burning or tingling as well as pain. IAD is often associated with redness, rash or vesiculation (pustules or blisters in or beneath the skin). IAD appears as redness of the skin with or without skin breakdown. In people with darker skin tones, the skin may appear darker purple, dark red or yellow. Skin may appear wet and macerated in the acute phase, and dryness or peeling skin appears in the chronic phase. The affected area usually has poorly defined edges and may be patchy or continuous over large areas. Dermatitis may spread to the skin folds.

IAD also has an impact on physiological and social functioning due to loss of independence and reduction in social activities.

Causes

Incontinence-associated dermatitis is due to a combination of chemical and physical irritation of the skin. Faeces contains digestive enzymes that breakdown and disrupt the skin barrier function. Urine contains urea, which increases the pH of the skin surface. The skin's natural pH is between 4.7 and 5.75. The presence of urine and faeces causes a rise in pH, which increases the permeability of the skin, affecting the barrier function as well as increasing the risk of infection due to bacterial colonisation. The skin of older people has an increased pH already, making them more susceptible to develop IAD. Moisture also weakens the skin and makes it more vulnerable to the effects of pressure and shear.

Friction to the skin causes physical irritation, which results in weakened skin. Friction increases when skin rubs over clothing, continence pads, and bed or chair surfaces.

The most common organisms involved with a cutaneous infection are *Candida albicans* and *Staphylococcus aureus*.

Distinction between IAD and pressure ulcers is important because preventive measures are different. IAD is the result of top-down damage; whereas pressure ulcers can be the result of both bottom-up and top-down damage, when the deeper tissue is affected by pressure and shear. However, IAD is a known risk factor for pressure ulcers.

Urinary tract infections, constipation and diuretics are some reversible causes.

Risk factors

There are several risk factors for the development of IAD, including:

- incontinence of urine, faeces (or both)
- increased frequency of incontinence
- use of occlusive containment products
- pre-existing skin conditions
- poor mobility or dexterity
- inability to maintain personal hygiene
- medications (antibiotics, immunosuppressants)
- poor nutritional status

Faecal incontinence is a high risk factor for IAD as it is the most severe irritant.

Quality indicators

The *Expansion of quality indicators for residential aged care* pilot requires reporting against each of 4 categories:

- 1A: Persistent redness without clinical signs of infection
- 1B: Persistent redness with clinical signs of infection
- 2A: Skin loss without clinical signs of infection
- 2B: Skin loss with clinical signs of infection

The pilot program is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

Prevention

Incontinence associated dermatitis can be prevented with appropriate skin cleansing and skin protection. Perineal skin cleansers are preferable to using water and soap. In practice and studies, soap and water perform poorly in the prevention and treatment of IAD. They should have a pH as near as possible to that of normal skin. Skin care is suggested after each incontinence episode, particularly if faeces are present.

A skin protectant or moisture barrier is recommended for patients considered at risk of incontinence-associated dermatitis development. There are many products available that contain either acrylate terpolymer barrier film, dimethicone or zinc oxide based ointment or paste. Skin protectant should be applied more frequently in individuals with frequent episodes of incontinence.

Optimal skin care following each major incontinence episode is important. This includes a skin cleanser and a skin protectant. Combined products incorporate cleansers, moisturisers and skin protectants.

Skin care and personal hygiene products should not contain dyes, fragrances or preservatives.

Treatment

The Therapeutic Guidelines recommends any of the following topical preparations when *C. albicans* is isolated or suspected:

- Clotrimazole 1% vaginal cream, once daily at bedtime for 6 nights
- Clotrimazole 2% vaginal cream, once daily at bedtime for 3 nights
- Clotrimazole 10% vaginal cream, once daily at bedtime for 1 night only
- Clotrimazole 100mg pessary, once daily at bedtime for 6 nights
- Clotrimazole 500mg pessary, once daily at bedtime for 1 night only
- Miconazole 2% vaginal cream, once daily at bedtime for 7 nights
- Nystatin 100,000U/5g vaginal cream, once daily at bedtime for 14 nights

Alternatively, fluconazole 150mg orally as a single dose can be given to residents who do not tolerate topical therapy or do not prefer vaginal products.

A clear diagnosis of IAD can be treated with short-term topical corticosteroids. The Therapeutic Guidelines suggests methylprednisolone aceponate ointment 0.1% (*Advantan Ointment*) applied daily for 2 to 4 weeks until symptoms resolve. This can be followed by hydrocortisone 1% ointment once daily for 2 to 4 weeks to prevent recurrence.

Established IAD can be difficult to treat and can often recur.

Summary

Incontinence-associated dermatitis is a common problem among aged care residents. It is defined as inflammation of the skin due to prolonged or repeated contact with urine and/or faeces. IAD presents with erythema and intact or broken skin. Appropriate skin care for the prevention and treatment of IAD includes cleansing, protection and restoration. Use of perineal skin cleansers is more effective than use of soap and water with a washcloth.

References

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