Preventing Incontinence Associated Dermatitis in the ICU

Kathryn Hughes, RN
Wellington Intensive Care Unit, Capital and Coast District Health Board, Wellington, New Zealand

Introduction

Incontinence associated dermatitis affects 36-50% of the ICU population, lengthening hospital stays and causing complications for critically ill patients [1]. Drawing on a case study from our unit, we examined current evidence to identify the best practice options for preventing IAD.

Our Case

A 48 year old woman was admitted to ICU, intubated and ventilated for pneumonia. During her ICU admission she develops diarrhoea. Her skin becomes excoriated around her perineal and perivaginal area and tears form in the folds around her groin. Over different shifts, different nurses care for this skin breakdown according to personal preference, amassing an arsenal of skin care products and lotions at her bedspace.

When she is extubated, this skin breakdown causes considerable pain and distress. She is often tearful and upset, and is reluctant to engage in rehabilitation.

This case raised questions about what critical care nurses can do to prevent IAD. A practice review showed that many different products were being used based on personal preference. No evidence was guiding practice and no policies were in place. The literature was reviewed and clinical guidelines identified.

Literature findings

The damage caused from incontinence is multifactorial. The skin is slightly acidic and urine is alkaline, so contact alters the skin’s pH contributing to breakdown and decreased barrier function. Faecal incontinence leaves active enzymes on the skin which break down tissue, as well as exposing it to faecal bacteria. Wet skin is soft and prone to pressure and shear injuries, as well as being cooler than dry skin and therefore having impaired blood flow.

To care for and protect at risk skin, the evidence highlighted a focus on 3 stages of IAD care: cleansing, moisturising, and application of a barrier product [2]. This recommendation is backed by multiple findings of benefits in large-scale clinical trials [3].

1. Cleansing: For cleaning the skin, pH balanced no-rinse and no-dry disposable wipes were most beneficial, and superior to water-and-lotion bed baths. Our ICU stocks Oasis™ Bed Bath Wipes, which also contain moisturisers. If a moisturiser is present in the cleansing wipes, separate moisturising is not required unless the skin appears dry and flaky after cleansing.

2. Moisturising: If cleansing wipes do not contain a moisturiser, or for especially dry skin, a separate moisturising agent with a high lipid content is recommended. This includes products containing lanolin, dimethicone, and oils such as olive or coconut oil. Products from this category stocked by our ICU included Alpha Keri Bath and Body Oil, a lanolin based oil used as a soap alternative or as a moisturiser after cleaning. Another option is 5% dimethicone cream, which also has some barrier protection properties. Petrolatum based moisturisers should be avoided as they easily transfer from the skin onto linen and absorbent liners, decreasing their ability to wick fluid from the skin. Any moisturiser should be applied sparingly so barrier application can have sufficient adherence.

3. Protective barrier: The final step in IAD prevention was the application of a protective barrier layer. Trials overwhelmingly favoured polymer based sprays, such as 3M Cavilon No Sting Barrier Film, when compared to other barriers such as zinc or dimethicone cream. Spray products are a clean application method, whereas tubs of cream easily become contaminated by dirty gloves. Polymer sprays act as a semi-permeable shield and remains intact for up to 72 hours on the skin, providing long lasting effective skin protection despite frequent cleansing. Although more expensive than creams, trials showed barrier spray is cost efficient, as it requires less product per application and takes less time to apply versus creams.

Other things to consider

Any skin breakdown should be monitored closely, with wound care charts established to monitor changes, and referrals made to specialist wound and incontinence services as appropriate. Regular pressure area cares should be maintained, including pressure relieving mattresses and regular turning. IAD can become complicated, and is easily infected by bacterial or fungal infections, in which case antibiotic or antifungal medication may be necessary. For extreme, ongoing faecal contamination a bowel management system may be indicated.

Conclusions and Recommendation

Nurses can work to improve patient outcomes and reduce the costs of caring for IADs. Due to the high incidence of IAD in the ICU population, IAD prevention should be used for every ventilated ICU patient and any patient with persistent diarrhoea.

The method and products used for preventing IAD should be universal and routine. The 3 step approach should be used: cleansing with wipes, moisturising with oil or dimethicone creams, and applying a protective barrier layer of polymer spray.

By preventing IADs nursing time can be released to focus on other important aspects of care for the critically ill patient, and, more importantly, patients can be spared the distress of IAD.

References