Moisture lesions and associated pressure ulcers: Getting the dressing regimen right

This study aimed to evaluate the efficacy of a combined dressing regimen in the management of moisture lesions and associated pressure ulcer development, with regards to wound healing and pressure ulcer prevention, along with the patient and clinician perspectives. Twenty patients referred to an acute wound care service with a diagnosis of reduced skin integrity due to incontinence, sweat, or wound exudate resulting in erythema, maceration, or combined with pressure ulcer formation were evaluated. Following assessment using a skin integrity tool, all patients underwent a cleansing process using a pH-balancing cleansing foam prior to application of a barrier cream, or barrier spray and soft silicone adhesive foam. The results demonstrated improved healing with no further deterioration of existing pressure ulcers.

METHODS
This study was carried out to evaluate patients referred to a large NHS Trust acute senior nurse wound care service that provides a consistent approach and leadership to all facets of wound care for all speciality services and across all age groups in conjunction with senior medical and surgical colleagues. All patients recruited had an initial diagnosis of reduced skin integrity due to incontinence, sweat, or wound exudate.

Skin integrity was assessed using a classification tool for assessment of skin integrity (Figure 1) developed by Bateman et al (2011) in line with the European Pressure Ulcer Advisory Panel (EPUAP) position statement (EPUAP, 2005). The tool directs the assessment of the skin, and classifies the patient as either healthy (H), erythemic (E), or as having epidermal damage in regards to lesions (M), and recognises combined reduced skin integrity and pressure ulcer presence (C).

The full tool provides a description of risk assessment and skin management to aid consistency in the care approach across clinical arenas, both community and acute. This tool was used to maintain a consistent approach to assessment, diagnosis, and subsequent management.

Following classification and as appropriate for their skin or wound type, patients were commenced on a management regimen of: (i) a skin-protecting barrier product as the primary layer; overlain by (ii) a soft, silicone-faced polyurethane foam island dressing (Figure 2). Patients were monitored over a 4-week period to evaluate the benefits of the regimen.

SHARON DAWN BATEMAN
Lead Nurse Wound Care, South Tees NHS Hospitals Foundation Trust, Middlesbrough

SAMANTHA ROBERTS
Project Nurse Wound Care, South Tees NHS Hospitals Foundation Trust, Middlesbrough

KEY WORDS
- Barrier product
- Classification tool
- Wound dressing
Figure 1. Classification tool aide memoire for assessment of skin integrity (Bateman et al, 2011).
Evaluated outcomes were: level of pain according to the McGill pain score (Melzack, 1975), duration of therapy, and skin outcome (designated as healed, healing, static, or deteriorating). The deterioration or development of further pressure ulcers within this patient group was also a key point for evaluation, because of the increased risk of pressure ulcer formation in those patients already presenting with incontinence-associated dermatitis (Fletcher, 2012).

RESULTS

Twenty patients were recruited (Table 1). All patients were deemed at either medium or high risk with regards to skin integrity and nutrition status via local assessment tools – Braden scale (Bergstrom et al, 1987) and Malnutrition Universal Screening Tool (NICE, 2006). Patient characteristics are shown in Table 1.

All 20 patients had various cleansing, dressing, and management regimens in place prior to the study commencing, including soap and water, sterile saline, non-irritant foam cleansers, incontinence pads, and various non-adhesive and adhesive sacral foams. Barrier spray or cream was being used in a minority of cases.

Evaluation of the dressing regimen

Following diagnosis and assessment using the skin integrity tool (Figure 1), all patients underwent a cleansing process using a pH-balancing cleansing foam prior to application of a barrier cream (those classified as E), or barrier spray and soft silicone adhesive foam (those classified as M or C).

Beeckman et al (2011) recognise that an increase in pH because of faeces, urine, or wound exudate increases stratum corneum swelling and alters lipid rigidity, increasing the permeability of the skin and thus reducing its barrier function. Furthermore, an alkaline pH increases bacterial burden, which can lead to cutaneous infection. Barrier products have been highlighted by Williams (2001) as reducing skin irritation and epidermal damage by forming a protective barrier against pH-increasing contaminants such as faeces, urine, and wound exudate.

In the present cases, Safetac® (Mölnlycke Health Care) soft silicone adhesive foam dressings, in either a sacral or square shape, were used as the secondary dressing (Figure 2). This dressing type was selected for its ability to minimises pain and wound bed trauma, and seal the area, thus ensuring exudate is contained and outside contaminants excluded (White, 2005). These key elements of the regimen were essential prior to the evaluation commencing because of the skin fragility and high pain scores in the patients involved (Box 1).

Those patients who had combined lesions with pressure ulcers had appropriate formulary cavity-packing products deployed prior to the study regimen being implemented. In the first week the dressing regimen was applied to all patients every 48 hours, reducing to 72 hours thereafter unless incontinence contaminated the dressing products, in which case redressing...
was immediate. The packing products were not changed, so the only change was the washing foam, barrier spray and secondary dressing. This was to reduce any variables which could have contained the exudate. The changes reduced the need for dressing change frequency as a positive outcome.

From the clinical perspective, the dressing regimen had a positive wound care healing outcome, patient experience and reduced dressing input resources.

Within the wound care arena the patients’ perceptions and experience of their wound care journey and the clinical input they receive is becoming equally valued from a national government drive. Patient satisfaction as a marker for quality within the NHS is quickly gathering pace with financial implications for healthcare budgets and business planning agendas becoming a priority (Blakemore, 2010). Within the evaluations, the patient’s story was documented alongside the clinical outcomes to provide a patient perspective to complement the success of the dressing regimens.

Annie’s story (Box 2) is a powerful adjunct to the clinical element of the evaluation in that it provides the reader with her personal experience, her priorities and needs which enables the clinician to gain a true insight into her expectations. Prompts such as this can enable more accurate care planning, need for change and improvement in the goal of achieving a positive patient wound care journey.

**DISCUSSION**

This evaluation of 20 patients of various ages with clinically assessed medium or high risk factors, a variety of wound types and stages of healing, demonstrated improved healing status outcomes alongside no further deterioration of present pressure ulcers or development of others (Table 2).

Of note were the reduced pain scores, maintenance of a protected wound bed from outside contaminants, and reduced number of dressing changes providing a more consistent dressing regimen, which impacted positively upon both nursing and financial resources. The patient experience is vital to the holistic wound care process, and this evaluation has demonstrated a positive wound care journey from both the patient and clinician perspective.
CONCLUSION
The introduction and use of a formulary barrier cream or spray alongside a soft silicone foam adherent island dressing in management of the moisture lesions or pressure ulcers in this study demonstrates a positive wound care healing outcome, patient experience and clinician perspective.

As part of the management of reduced skin integrity, and pressure ulcer deterioration, it is essential to continue to consistently implement the use of formulary products that have a good evidence base for their effectiveness, and robust assessment tools and care plans. This should be in conjunction with fundamental care needs such as hygiene, nutrition, hydration and mobility if excellent standards of care are to be maintained.

In healthcare we are witnessing a significant shift towards patients who are of increased age and bariatric status with complex co-morbidities, alongside stringent corporate targets, reduced bed availability and a focus on reducing the length of bed stay.

As clinicians we must continue to explore new and innovative methods for managing our patients using current wound care formulary products, and to develop streamlined assessment and management tools to ensure that we are providing the best practice standards for our patients and their carers.

REFERENCES

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