

Evaluation of a skin protectant ointment and an incontinence cleanser

Alexandra Freitas

Incontinence-associated dermatitis (IAD) relates to skin breakdown from exposure to urine or faeces, and its management involves implementation of structured skin care regimens incorporating appropriate use of skin barrier products to protect the skin from exposure to moisture and irritants. Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser are part of the Total Barrier Protection™ (Medicareplus International) range indicated for management of moderate-to-severe IAD and other moisture-associated skin damage (MASD). This article summarises the findings of multi-centred patient evaluations of Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser, and aims to demonstrate the clinical and cost benefits of using these products for the prevention and management of MASD.

KEYWORDS:

- Incontinence-associated dermatitis
- Skin barrier products
- Patient's quality of life
- Cost effectiveness

of pressure ulcer development, as overhydrated skin is much more susceptible to damage from extrinsic factors such as pressure, friction and shear (Clark et al, 2010).

Another important consideration with IAD is the effect on the patient — IAD can be painful and debilitating and has been associated with a reduced quality of life, and therefore appropriate management is key to maintaining high standards of care and promoting good patient outcomes (Doughty et al, 2012). It can also be time-consuming and expensive to treat, which has an impact on clinical resources and financial implications (Doughty et al, 2012).

SKIN CARE REGIMENS

Medicareplus International devised a moisture damage treatment strategy to aid care providers of all levels to manage patients using the most appropriate product at a given time. Total Barrier Protection™ (TBP) provides a unique range of products with clear guidance and rationale for use based on the type and severity of moisture exposure and degree of skin damage, enabling the skin care strategy to be tailored to individual patient needs. In the author's clinical opinion, by introducing a simple and consistent approach to skin protection, implementation of TBP™ should prevent product misuse and drive efficiency savings.

Medi Derma-PRO Skin Protectant Ointment contains dimethicone and bioadhesives, providing the tacky consistency suitable for use on severe skin damage. While similar products available advocate usage across the complete scale of skin damage from

Over the last decade, modern skin barrier products have steadily replaced the use of traditional barrier products to maintain skin integrity of vulnerable patients. These cream, film and ointment formulations are designed to protect skin from the effects of mechanical or chemical injury. They are predominantly used in the prevention and management of moisture-associated skin damage (MASD), an umbrella term used to define the various causes of damage associated with prolonged, or continuous exposure of the skin to moisture (Young, 2017).

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Moisture-associated skin damage (MASD) occurs when there is prolonged exposure of the skin to excessive amounts of moisture from incontinence, wound exudate or perspiration. Incontinence-associated dermatitis (IAD) relates specifically to skin breakdown from faecal and/or urinary incontinence (Beeckman et al, 2009), and has been defined as erythema and oedema of the skin surface (Gray et al, 2012). It has become well-recognised that the presence of IAD greatly increases the likelihood

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intact to severe, the TBP™ strategy guides users to be more selective, using the right product for the right level of MASD. In view of this, Medi Derma-PRO is indicated for skin damage at the more moderate-to-severe end of the spectrum, where maximum barrier protection is required and its properties will provide most benefit. In this manner, use of more expensive products when they are not clinically indicated can be reduced.

The Medi Derma-PRO Foam & Spray Incontinence Cleanser meets the requirements for an appropriate and effective incontinence cleanser — a pH-balanced, non-sting, non-rinse formulation to easily and effectively cleanse skin and remove adherent bodily fluids while minimising the need for unnecessary rubbing (Bradbury et al, 2017). The cleanser contains ingredients such as glycerine that helps protect the skin and promote a soft non-sticky skin feel for patient comfort; the cleanser also contains a surfactant that cleans the skin without drying it out like soap and water.

A series of clinical evaluations were conducted across the UK to gain clinical evidence on the efficacy and efficiency of Medi Derma-PRO Skin Protectant Ointment and Foam & Spray Incontinence Cleanser for management of IAD, and to garner clinical opinion with regards to outcomes, ease of use and cost effectiveness compared to previously used barrier products.

METHOD

A retrospective review of clinical evaluation data of 110 patients from 47 UK acute and community sites was performed. All of the patients were treated with Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser.

PATIENT POPULATION

The evaluation inclusion criteria were:

- ▶ Patients 'at-risk' of, or already being treated for MASD, with an indication suitable for treatment

Medi Derma-PRO Total Barrier Protection™ range



Medi Derma-PRO Total Barrier Protection™ product range.

Medi Derma-PRO Skin Protectant Ointment is available in a 115g tube. A thin, uniform coating should be gently spread over the whole affected area, with reapplication after every episode of cleansing. It should be used in conjunction with Medi Derma-PRO Incontinence Cleanser. Medi Derma-PRO Foam & Spray Incontinence Cleanser is a moisturising cleansing solution indicated for use on moderate to severely damaged skin. Severely damaged skin can be defined as large areas of erythema, with more than 50% of the affected area disrupted (Jones and Winterbottom, 2019). The Cleanser is available in a 250ml bottle and has a foam and spray mode (the foam mode enables the solution to stick better in hard-to-reach areas). It can be applied directly to the skin or onto a clean washcloth; the skin should be gently wiped clean and patted or air dried (there is no need to rinse it off).

- ▶ Participants had to agree to treatment, have capacity to consent, and be reviewed regularly by the clinical evaluator.

This review is a subset of a larger retrospective review of clinical evaluations that included other brands like Medi Derma-S Barrier Cream and Medi Derma-S Barrier Film. Therefore, once the participants were identified by a registered clinician, the most suitable Medi Derma formulation was chosen depending on the assessment of their skin damage (i.e. mild, moderate or severe).

Before starting the evaluations, a Medicareplus International clinical nurse advisor visited each site and provided an overview of the evaluation process and product training to all relevant staff. This included:

- ▶ Clinical indications for use
- ▶ Correct application/removal techniques
- ▶ Frequency of re-application
- ▶ How to complete the documentation.

DATA COLLECTION

The data collected from a standardised product evaluation form was summarised in terms of:

- ▶ Product selection and number of patients who used it
- ▶ Demographics (male/female ratio and age range)
- ▶ Rationale for using the specific barrier product
- ▶ Previous or usual skin barrier products used
- ▶ Level of skin damage before starting the evaluation
- ▶ Average duration of treatment
- ▶ Observations of the skin condition at the end of the evaluation
- ▶ Overall product performance compared to previous or usual barrier products used
- ▶ Clinician and patient additional feedback/comments.

RESULTS

Data from a total of 47 UK acute and community sites showed 110 patients used Medi Derma-PRO Skin Protectant Ointment in combination with Medi Derma-PRO Foam & Spray Incontinence Cleanser.

The age ranges disclosed for these patients varied from 21 to 98 years, although the majority of the cohort (77%) was over 70 years of age.

The main rationale for using Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser was recorded for 100 of the total 110 patients. 77% (n=77) stated that it was used to treat patients with IAD, 19% (n=19) used it for the prevention of IAD, and the remaining 4% (n=4) used it because the patient's skin was dry.

Medi Derma-PRO Skin Protectant Ointment replaced a comparable product on the market as the skin barrier product in 50 (46%) cases. Previous skin cleansing regimens before the evaluation were documented for 79/110 patients: 49% (n=39) were cleansed with a skin barrier ointment and 32% (n=25) with soap and water. The remaining 15 patients had either cleansing foams (n=6), emollient soap substitutes (n=4), wipes (n=3) or water (n=2).

Following their cleansing regimen, these patients had a variety of topical barrier products applied. A total of 86 responses were documented for this element of the evaluation: 46% (n=50) had a barrier product applied following skin cleansing, 20% (n=17) had a barrier film, 6% (n=5) were treated with a modern barrier cream, and 12% (n=10) had no barrier product applied. The remaining four patients had a traditional barrier cream, or antifungal cream.

Before starting the evaluations, the clinicians visually assessed their patients' skin condition and recorded the extent of any MASD. Of the 110 Medi Derma-PRO evaluations, 87 responses were documented:

- ▶ 33% (n=29) suffered with severe skin damage
- ▶ 44% (n=38) with moderate skin damage
- ▶ 21% (n=18) with mild skin damage
- ▶ 2% (n=2) had no skin damage.

The average duration of use for the Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser cohort was 10 days (based on 59/110 responses).

'Findings from these clinical evaluations reinforce that IAD is by far the most common cause of MASD, due to prolonged or chronic exposure of urine and/or stool, particularly liquid stool on the skin.'

On completion of each evaluation, a visual assessment of the patient's skin condition was undertaken by the clinician. Observations were then recorded in terms of whether the skin had deteriorated, remained the same, or improved.

Where applicable, in association with anti-fungal treatments, Medi Derma-PRO Skin Protectant Ointment provided a clinically supportive treatment for the management of skin infections.

A total of 85 clinicians responded from the 110 Medi Derma-PRO Skin Protectant Ointment and Medi Derma-PRO Foam & Spray Incontinence Cleanser evaluations:

- ▶ 71% (n=60) noted an improvement
- ▶ 28% (n=24) reported that it remained the same
- ▶ 1% (n=1) stated that the skin had deteriorated.

Following each evaluation, the clinicians were asked to rate the overall performance of Medi Derma-PRO against products used prior to the evaluations, or usual product if no skin barrier had been previously used.

A total of 103 responses from the 110 Medi Derma-PRO Skin Protectant Ointment and Medi

Derma-PRO Foam & Spray Incontinence Cleanser evaluations were returned:

- ▶ 78% of clinicians (n=80) rated it as much better or better
- ▶ 20% (n=21) rated it the same
- ▶ 2% (n=2) rated it as worse than products previously or usually used.

The final element of the evaluations asked the clinician and/or patient to provide any additional feedback regarding the treatment provided or received.

Feedback relating to Medi Derma-PRO ointment and cleanser included:

Much better than soap and water. [patient]

The staff really liked the cleanser, very effective at cleaning; the patient was very happy. [nurse]

Patient reported ointment gave her instant relief, very easy to apply. [nurse and patient]

This treatment does everything the old products did but costs less... will use this again! [nurse]

DISCUSSION

Findings from these clinical evaluations reinforce that IAD is by far the most common cause of MASD, due to prolonged or chronic exposure of urine and/or stool, particularly liquid stool on the skin (Ousey and O'Connor, 2017). This type of damage is also more prevalent in the elderly population, where continence problems are more common and skin integrity is susceptible to damage (Bradbury et al, 2017).

In relation to skin cleansing, it appears that soap and water still remain a common cleansing method. However, this is generally believed to be sub-optimal practice (Beekman et al, 2011). Traditional soaps are alkaline, can alter the protective acidic mantle of skin and remove the natural

sebum, resulting in drier skin and reduced protection from skin commensals (Beeckman et al, 2009). This can further compromise the skin and increase the risk of MASD, especially in patients with vulnerable or fragile skin (Beldon, 2008; Beeckman et al, 2015).

The fundamental aspects of MASD prevention and management should be based on skin cleansing with a mild, pH-balanced soap substitute, or leave-on/no-rinse cleansers, to remove contaminants and microorganisms, followed by the application of a skin moisturiser and an impermeable barrier that provides total skin protection (Beldon, 2012; Beeckman et al, 2015; Lichterfeld-Kottner et al, 2020).

The successful use of Medi Derma-PRO Skin Protectant Ointment in association with fungal treatments also provided useful and clinically relevant information during certain evaluations to support use of the products in this way. While many skin barrier creams are not appropriate for such use due to their moisturisation properties, these evaluation results suggest that Medi Derma-PRO Skin Protectant Ointment will provide a suitable barrier protection required to prevent further exposure to moisture and irritants exacerbating any secondary infection, while not donating excessive moisture to the skin from the product itself.

In the author's clinical opinion, the overall performance ratings and additional feedback received, in comparison to equivalent products previously or usually used, is testimony to the products' efficacy. The majority of clinicians in the evaluations found them to be better than, or at least the same as, similar products currently available at the time, further supporting the effectiveness of these products in clinical practice.

An important consideration is the need for further education and training regarding appropriate use of skin barrier products, an outcome which supports the clinical need

for an easy-to-implement, moisture damage treatment strategy like TBP™. Within this strategy, Medi Derma-PRO is indicated for use on moderate-to-severe moisture-related skin damage — the product is designed to address the problems with managing this degree of damage specifically and not with the aim of replacing simpler and more cost-effective barrier products, such as creams and films.

'Adopting an integrated and holistic approach and focusing on the importance of skin integrity, and effective prevention and management strategies, may serve as a great benefit to improving practice.'

The positive clinician feedback received for Medi Derma-PRO ointment and cleanser provides further support for the efficacy of the products in clinical practice, and is especially encouraging when they were found to be better than or at least the same as the most comparable products available on the market at the time. This provides clinicians with a degree of choice when choosing this type of cleansing and barrier product, and allows for consideration of other important factors, such as unit cost, while still maintaining confidence in achieving good patient outcomes with high quality products.

CONCLUSION

Giving clinicians product choice for managing varying levels of skin damage is important to ensure that IAD and other MASD are managed appropriately and prevented where possible. This, in turn, not only promotes improved quality of life for patients and reduces the prevalence and incidence of such problems, but also offers financial savings. This could also impact on prevalence, incidence and consequences of development

of pressure injuries, due to the accepted association. When used as part of the TBP strategy, the Medi Derma-PRO Skin Protection System can be effective for preventing further deterioration of IAD, while reducing overuse of expensive products when not clinically necessary, as well as enabling all levels of care providers to consistently implement a standardised regimen.

While the use of skin barrier products contributes to the successful maintenance of skin integrity, it is essential that healthcare practitioners have a better understanding of the strategies and evidence to support clinical practice, and effectively manage healthcare resources. Additionally, it is of equal importance to continue to raise awareness that all forms of MASD can have a significant effect on patient wellbeing and quality of life (Fletcher et al, 2020). This can only be achieved through the provision of basic skin care education and training for all registered and non-registered healthcare practitioners, along with guidance for best practice, to reduce the incidence of these and related skin conditions, such as cutaneous infection and pressure ulcers (Stephen-Haynes and Stephens, 2012; Beeckman et al, 2014; Fletcher et al, 2020). Adopting an integrated and holistic approach and focusing on the importance of skin integrity, and effective prevention and management strategies, may serve as a great benefit to improving practice (Beeckman et al, 2020).

The reality for healthcare is that choices have to be made about how money and resources are allocated for maximum overall benefit (International Consensus, 2013), and decisions are often based on the unit cost of a product. In the author's clinical opinion, implementing a prevention or management strategy, such as TBP™, simplifies decision-making, prevents inappropriate product use and reduces costs, while still ensuring confidence in achieving good patient outcomes. **JCN**

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KEY POINTS

- Incontinence-associated dermatitis (IAD) relates to skin breakdown from exposure to urine or faeces, and its management involves implementation of structured skin care regimens incorporating appropriate use of skin barrier products to protect the skin from exposure to moisture and irritants.
- The fundamental aspects of MASD prevention and management should be based on skin cleansing with a mild, pH-balanced soap substitute, or leave-on/no-rinse cleansers, to remove contaminants and microorganisms, followed by the application of a skin moisturiser and an impermeable barrier that provides total skin protection.
- Total Barrier Protection™ (TBP) provides a unique range of products with clear guidance and rationale for use, based on the type and severity of moisture exposure and degree of skin damage, enabling the skin care strategy to be tailored to individual patient needs.
- Adopting an integrated and holistic approach and focusing on the importance of skin integrity, and effective prevention and management strategies, may serve as a great benefit to improving practice.

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Revalidation Alert

Having read this article, reflect on:

- Your knowledge of MASD
- Skin care regimens you introduce to prevent and manage IAD
- How you select which skin barrier product to use.

Then, upload the article to the free JCN revalidation e-portfolio as evidence of your continued learning: www.jcn.co.uk/revalidation