Case Study

The Evolution of Ostomy Barriers

Use of Ceramide-Infused Ostomy Barrier* in a Small Case Series

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Aim:

This case series will describe the use of a ceramide-infused ostomy barrier for peristomal skin issues.

Statement of Problem:

Ostomy barriers have evolved over the decades. Original systems in the 1930s that incorporated glass and porcelain were replaced with zinc-based barriers in the 1950s. Modern hydrocolloid barriers were introduced in the 1970s, giving way to most currently used pouching systems. Product developments were matched with the introduction of broad principles of care such as the protection of the stoma and the peristomal skin. Products were intended to not cause harm through their application, removal and day-to-day wear.

Unfortunately, recent literature has been replete with examples highlighting the prevalence of peristomal complications. Studies suggest that complications range from 16% to 74%, and that patients are frequently unaware of their skin condition.[1-4] This suggests that current principles of ostomy care and available products are insufficient for meeting the goals of care, leaving room for product improvement.

Ostomy barriers are known to have an impact on peristomal skin. It has been reported that peristomal skin is impacted with barrier occlusion and barrier removal (skin stripping and increased transepidermal water loss).[5,6] Ceramide is a type of skin lipid which helps protect against dryness. Most skin disorders that have diminished barrier function have changes in the total amount and pattern of ceramide present.[7]

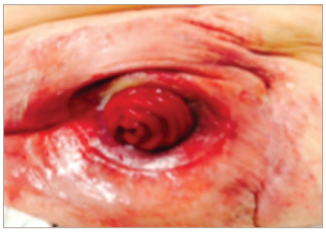
Methods:

Descriptive case studies/photo series includes patient history, initial treatment modalities, and the use of a ceramide-infused ostomy barrier.

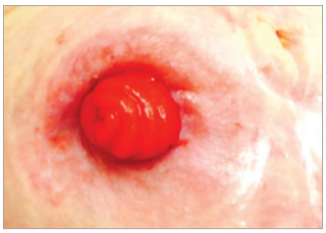
Peristomal skin had no visible abnormalities pre and post ceramide barrier application

Case Study 1

- Loop ileostomy – Utilizing an extended wear convex barrier
- Developed severe peristomal itchiness within one year of ostomy surgery
- No demonstrable skin abnormality noted
- Skin protective wipes tried with no improvement and discontinued
- Alternative extended wear convex barriers utilized with no improvement
- Topical steroid initiated with slight improvement
- Discontinued topical steroid and introduced a ceramide-infused ostomy barrier
- Itchiness resolved



Pre ceramide-infused barrier



Post ceramide-infused barrier

Case Study 2

- Ileal Conduit – Utilizing an extended wear convex barrier
- Developed extensive peristomal erythema and partial-thickness skin loss within six months of ostomy surgery – etiology unclear
- Topical anti-fungal initiated with no improvement and discontinued
- Treated with a solid skin barrier interface with no improvement and discontinued
- Topical steroids utilized with temporary improvement
- Skin condition deteriorated
- Dermatology consult suggested repeat anti-fungal and alternate topical steroid with some improvement but not completely
- Topical steroid discontinued and ceramide-infused ostomy barrier introduced
- Erythema and partial thickness skin loss resolved

Case Study 3

- End ileostomy
- Skin irritation and discomfort interfered with sleep and social activities
- Consulted to a dermatologist with a diagnosis of psoriasis
- Treated with a psoriasis medication with no improvement and discontinued
- Started on ceramide-infused ostomy barrier (Day 1)
- Rapid improvement of skin and return to nearly normal skin texture and function (Day 7 and Day 14)
- Able to return to normal activities and discomfort resolved

Day 1

Day 7

Day 14

Case Study 4

- End ileostomy
- Presented with skin stripping related to frequent barrier changes every other day as a personal preference (no leakage associated with barrier change routine)
- Introduced a ceramide-infused ostomy barrier for 10 days with rapid improvement of peristomal skin
- Continued with every other day barrier change and skin remained less irritated
- After first application the patient asked " Is this supposed to moisturize? My skin feels like it is being moisturized"

Day 1

Day 10

Conclusion:

The case studies presented demonstrate that a ceramide-infused ostomy barrier was useful in the management of peristomal skin issues and perhaps larger case studies should be conducted to determine if a ceramide-infused barrier can have a more preventative effect. Further research may help ET nurses to consider reassessing their traditional care model of reacting to peristomal skin issues to a new model of preventing peristomal skin issues.

*CeraPlus skin barrier with Remois Technology

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