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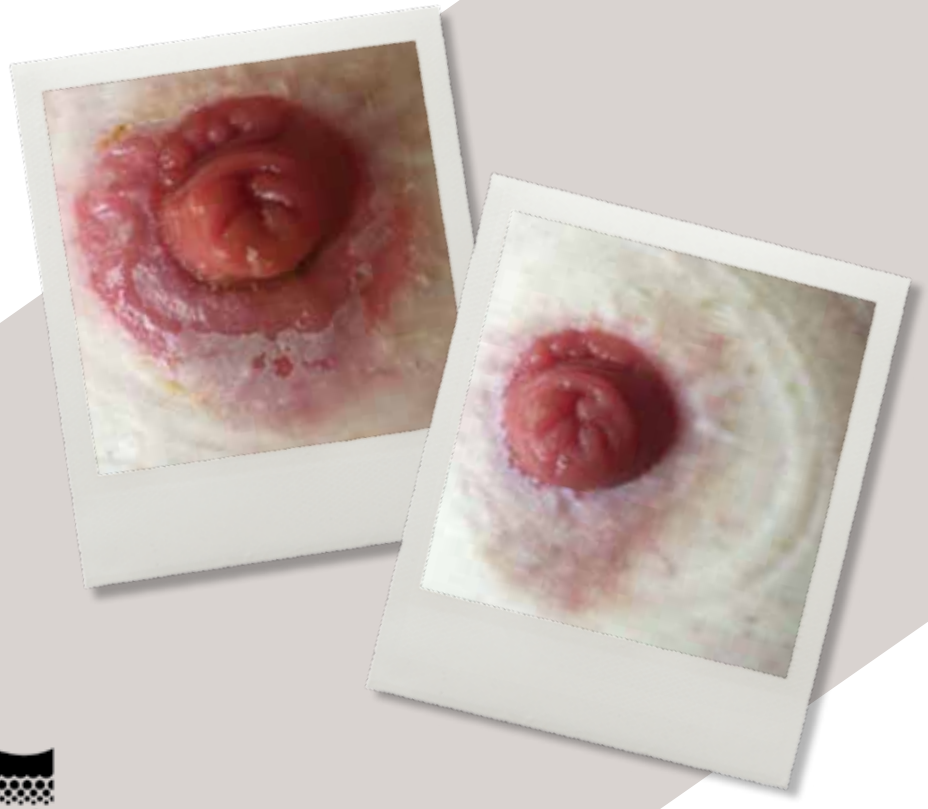
Clinical Case Studies using the CeraPlus™ Skin Barrier with Remois Technology*



Remois

*Remois is a technology of Alcare Co., Ltd.

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Here are a collection of case studies where **CeraPlus** is proven to be helpful in managing peristomal skin issues.

The types of complications, the reasons for them, and the solutions used to treat them can vary widely. For clinicians, managing these peristomal skin complications takes time and effort. For patients, sore peristomal skin can have a huge impact on their quality of life. Peristomal skin complications are the most common post-operative complication following creation of a stoma[1].

Our aim is to restore and maintain peristomal skin integrity and quality of life by finding a suitable skin barrier formulation for the patient, and ensuring a proper skin barrier fit around the stoma.

References:

1. Søren Meisner, Paul-Antoine Lehur, Brendan Moran, Lina Martins, Gregor Borut Ernst Jemec PLoS One. *Peristomal Skin Complications Are Common, Expensive, and Difficult to Manage: A Population Based Cost Modeling Study* 2002: 7(5): e37813.

Use of **CeraPlus** skin barrier on a patient with a colostomy

Setting
The patient was admitted to the hospital for an emergency colostomy and Hartmann's procedure in August of 2015 for a diverticular stricture.

Patient Overview
The patient is a 67 year old male who leads an active life, and is in good health. He has no co-morbidities or known allergies. He was placed on a standard wear skin barrier with no tape post operatively in the hospital, and continued on this product following discharge home.

Problem
Within a few weeks, despite having no problems with leakage or any signs of Peristomal Moisture Associated Skin Damage (PMASD), the patient started showing signs of peristomal skin irritation in the area underneath the skin barrier (Photo 1). The patient made an urgent call complaining that his skin was red, itchy, and sore. He also complained that his pouch was not adhering and that he was becoming increasingly concerned of a pouch failure in public.

Interventions
The patient was asked to switch to a Hollister SoftFlex skin barrier for its gentle properties. A skin swab was taken for a microbial culture and sensitivity test. No significant growth was detected, and the results were negative for Methicillin-resistant Staphylococcus Aureus (MRSA). Within a few days, the peristomal skin started to show improvement. The pouch was showing good adhesion, and the red and sore skin started to improve. However, the itching continued and was interrupting his sleep so 0.1% topical steroid, prescribed by a General Practitioner, was commenced (Photo 2).

After another week the peristomal skin showed further improvement and the General Practitioner recommended the patient discontinue the topical steroid. Unfortunately, his skin became inflamed again and increasingly itchy and irritated. This required the use of an anti-inflammatory medication for pain relief. The topical steroid was not reinstituted by the General Practitioner, as it is not to be used as a long-term treatment. The patient was then switched from the Hollister SoftFlex skin barrier to the Hollister **CeraPlus** skin barrier.

Outcomes
Within 2 days of changing to the CeraPlus skin barrier, the patient indicated that the irritation and itching of his peristomal skin had stopped. He no longer required an anti-inflammatory medication for pain relief. (Photo 3).

Conclusion
This case was challenging for several reasons. While a good fit around the stoma was achieved with each of the different skin barriers tried with no evidence of leakage, the patient was experiencing irritation and itching of the peristomal skin.

Contributing Author and Affiliations

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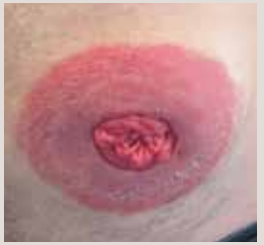

Photo 1 Irritated peristomal skin in the area underneath the skin barrier.

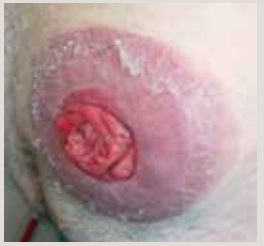

Photo 2 Some improvement seen with a change in skin barrier, and the application of a topical steroid.

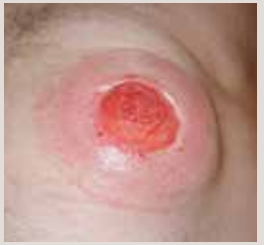

Photo 3 Further improvement seen during use of the CeraPlus skin barrier.

Use of **CeraPlus** skin barrier on a patient with an ileostomy

Setting
The patient is a 49 year female who underwent a sub-total colectomy and proctectomy with end ileostomy formation.

Patient Overview
After initial difficulties with pouches leaking she settled with a one-piece soft convex pouching system with which she remained leak free. She would change on alternate days and felt confident and able to restart her social activities following a difficult and emotional period.

Problem
At the first annual review she mentioned that her peristomal skin had turned sore and itchy in places (Photo 1). On checking her pouch changing technique, all was correct. She was seen in clinic and had a skin swab taken to rule out infection. This was negative. The inflamed areas did respond to steroid treatment but returned quickly once this was discontinued. She was beginning to feel frustrated, uncomfortable, her mood became low and she began to isolate herself from family and friends. Alternative pouching systems were trialled in case she had developed a sensitivity to the adhesive. None of these pouching systems made any difference to the irritation and she felt they leaked frequently. She went back to her reliable one-piece soft convex pouching system each time.

Interventions
We discussed trying a two-piece pouching system with a **CeraPlus** convex skin barrier. We chose to use the convex skin barrier as she had problems with other flat pouching systems leaking in the past. She changed the skin barrier every 3 days and the drainable pouch daily. Over the course of 2 weeks, the peristomal skin showed significant improvement and she reported relief from soreness and itching (Photo 2).

Outcomes
Before trying the convex CeraPlus pouching system, this patient had become despondent and felt she would have to live with either regular steroid treatment, or irritation. The irritation has not returned and she feels much less anxious. This allowed her to gradually rebuild her confidence and resume her social activities.

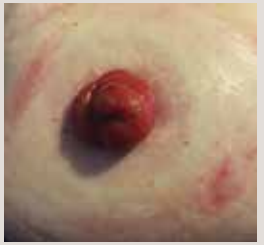

Photo 1 Areas of irritated peristomal skin.

Photo 2 Improvement seen to the peristomal skin after using the CeraPlus skin barrier for two weeks.

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Use of **CeraPlus** skin barrier on a patient with an ileostomy for ulcerative colitis

Setting
This case study is set in the community, in the patient's own home. The patient concerned was 3 months post procedure, subtotal colectomy with formation of an internal pouch and diverting loop ileostomy for ulcerative colitis.

Patient Overview
The patient is a 36 year old female. She had been diagnosed with ulcerative colitis five years ago and following an exacerbation had made the decision to have ostomy surgery. She had no known sensitivities or drug allergies.
Post operatively, she had recovered well although, she had high output while in hospital which was controlled through dietary manipulation. Initially, she used a one-piece pouching system with a standard wear skin barrier and drainable pouch. This allowed for the pouch to be changed daily without irritation or damage to the peristomal skin. However as the stoma matured it became apparent that a convex skin barrier was required to prevent leaks from occurring. After trying various pouching systems, she found a two-piece pouching system with an extended wear convex skin barrier suited her needs. She would change the skin barrier on alternative days and the pouch daily.

Problem
On visits, the patient would occasionally mention her peristomal skin felt itchy. On examination there was often nothing visible to indicate that there was any changes to the skin integrity. It was established that she generally would use water to clean around the stoma and peristomal skin. If she used soap, which she did on some occasions, this would be a non-perfumed soap and she rinsed and dried the area thoroughly before applying a new skin barrier.

Prior to a scheduled home visit, she telephoned requesting to be seen sooner as she felt the peristomal skin had become sore and itchy. This was effecting her quality of life to such an extent that she wanted to just stay in bed. On reviewing her at home, it was found that the peristomal skin was intact and there were no signs of inflammation, however, she was distressed. After a long discussion it was established that there were no changes in her peristomal skin care regime or medications.

Interventions
After further discussion with the patient, it was decided that she would try a two-piece **CeraPlus** convex skin barrier changing the skin barrier on alternative days.

Outcomes
She was provided with a seven day supply of CeraPlus skin barriers and another appointment was made to review her progress. However, on the fourth day of using CeraPlus, a text message was received from her stating she "loved" the new skin barrier and felt her skin "was very comfortable" and the itching, which was making her life miserable, had ceased.

Conclusion
Itching had a detrimental effect on this patient's quality of life. From a clinical perspective itching can be very difficult to treat when the peristomal skin appears to be intact and free from inflammation. This case study highlights the positive affect the introduction of the CeraPlus skin barrier had within the overall plan of care for this patient.

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Use of **CeraPlus** skin barrier on a patient with an ileostomy following repair of a parastomal hernia

Setting
The patient was cared for in the community following repair of a parastomal hernia.

Patient Overview
The patient is a 64 year old female who had emergency surgery resulting in formation of a loop ileostomy. However, this ileostomy was unable to be reversed due to her unstable Chronic Obstructive Pulmonary Disease (COPD). As a complication of having several acute episodes of the COPD, she developed a rather large parastomal hernia. Her surgeon felt it was unwise to operate due to risk to her health, but was forced to operate following a complete bowel obstruction as a result of the parastomal hernia.

Problem
During a routine home visit, the patient stated she had intense peristomal pain. She described the pain as similar to the bowel obstruction pain experienced before having the parastomal hernia repaired. She was very anxious and concerned that something had gone wrong and that she would need readmitting to hospital. Upon examination, the stoma was noted to be pink and healthy, and when it functioned, the stoma was telescoping and retracting to skin level. The retraction was allowing effluent to leak under the skin barrier resulting in skin maceration (Photo 1). The patient later reported her peristomal skin was itchy in addition to the maceration. She was reassured she did not require admission to the hospital nor an operation.

Interventions
After further discussion with the patient, it was decided that she would try a two-piece **CeraPlus** convex skin barrier changing the skin barrier on alternative days.

Outcomes
She was provided with a seven day supply of CeraPlus skin barriers and another appointment was made to review her progress. However, on the fourth day of using CeraPlus, a text message was received from her stating she “loved” the new skin barrier and felt her skin “was very comfortable”
and the itching, which was making her life miserable, had ceased.

Interventions
Following the repair of the parastomal hernia, she had managed the ileostomy using a flat one-piece pouching system with a barrier ring, which was changed daily. However, after the assessment of the stoma retracting during function the decision was made to use a convex pouching system. The area was very painful and she wished to try a two-piece pouching system so she could leave the skin barrier in place for 2-3 days and change the pouch daily. A two-piece **CeraPlus** convex skin barrier with a drainable pouch would allow her to do this. As she was changing from using a one-piece to a two-piece pouching system, she was taught the proper application.

It was agreed she would change the skin barrier every third day and remove it by using an adhesive remover to help prevent skin stripping. The pouch could be changed daily. She continued to cleanse around the stoma with water as per her normal routine.

Outcomes
A home visit was organised to assess the peristomal skin 10 days later (Photo 2). The patient reported the peristomal pain and itching had resolved and she felt much happier.

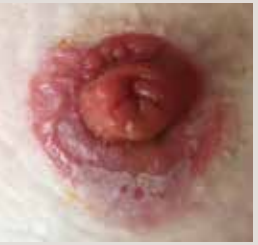

Photo 1 Maceration to peristomal skin.

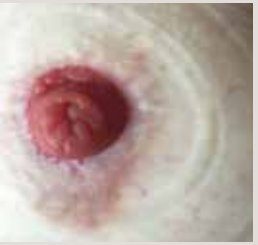

Photo 2 Peristomal skin after use of a two-piece convex CeraPlus skin barrier for 10 days.

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Use of **CeraPlus** skin barrier on a patient with a urostomy

Patient Overview

This lady is a 55 year old with Systemic Lupus Erythematosus (SLE). Systemic lupus erythematosus, often abbreviated as SLE or lupus, is a systemic autoimmune disease in which the body's immune system mistakenly attacks healthy tissue[1].

The patient lives with her adult son in a ground floor flat as she is wheelchair bound. The patient had a cystectomy and formation of a urostomy for bladder cancer. The patient had been using the same two-piece extended wear pre-sized skin barrier for 3 years with a wear time of 2-3 days, before she developed peristomal skin complications.

Problem

The patient contacted me to say the two-piece skin barrier she was using would no longer adhere to her skin and her peristomal skin had become sore, wet and itchy **(Photo 1)**. She was experiencing leaks as the skin barrier would not stick to her skin, which in turn was exacerbating the skin complaint. Wear time had significantly reduced to only a few hours.

Initially a skin swab was taken. The result of this was inconclusive. As she suffered with systemic lupus erythematosus (SLE) it was thought that her skin complaint could be a manifestation of her lupus, known as acute cutaneous lupus, as she was also experiencing kidney problems due to a lupus "flare-up".

Some people with lupus can develop a type of skin disease called acute cutaneous lupus. The most typical form presents as a "butterfly rash" or flattened areas of red skin on the face. However, this skin complication can also appear on other areas of the body. The rash does not typically produce scarring, although changes in skin color may occur[2].

Interventions

After unsuccessfully trying different barrier preparations on the peristomal skin, the decision was made to use the two-piece **CeraPlus** cut-to-fit flat skin barrier.

Outcomes

Improvement was seen to the peristomal skin after using the CeraPlus skin barrier for one week. The peristomal skin was drier and the patient reported a reduction in itching and soreness **(Photo 2)**. Continued improvement to the peristomal skin was noted after using the CeraPlus skin barrier for 3 weeks. At this time, the patient no longer complained of itching or soreness **(Photo 3)**.

Conclusion

Use of CeraPlus in this case study as part of the overall plan of care for this patient provided a positive outcome. She felt a sense of confidence and reassurance due to the adhesion and increased wear time. The peristomal skin returned to normal condition and the symptoms of pain and itching were eliminated.

1. "Systemic lupus erythematosus." In *Wikipedia, The Free Encyclopedia,* 14 Aug. 2015, https://en.wikipedia.org/w/index.php?title=Systemic_lupus_erythematosus&oldid=734497167. Accessed 9 July 2016.

2. Sontheimer, Richard D. *"How Does Lupus Affect the Skin?"* Lupus Foundation of America, Inc., 12 July 2013, http://www.lupus.org/answers/entry/how-lupus-affects-skin. Accessed 9 July 2016.

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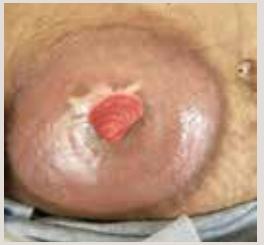

Photo 1 Peristomal skin is moist with areas of redness. Patient complained of itching and soreness.

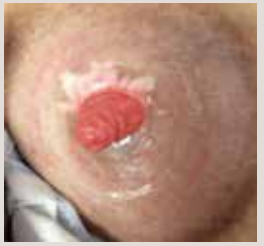

Photo 2 Improvement seen to the peristomal skin after using the CeraPlus skin barrier for one week.

Photo 3 Continued improvement seen to the peristomal skin after using the CeraPlus skin barrier for three weeks.

Use of **CeraPlus** skin barrier on a patient with an ileostomy experiencing leakage issues

Patient Overview

The patient is a 62 year old gentleman who underwent an anterior resection and formation of a loop ileostomy for rectal cancer. Due to a stricture at the anastomosis site, the stoma has not been able to be reduced and may be permanent. This gentleman had been troubled with high output issues despite using high doses of an anti-diarrhoeal medication to control the ileostomy output. The patient's stoma is retracted as it lies in a "dip" of skin. This coupled with the high output issues, may make him prone to leakage.

Problem

Since his stoma formation, one year ago, the patient has used a one-piece convex pouching system, often changing daily when his peristomal skin became irritated. He was also using a skin barrier wipe to help protect his peristomal skin. Despite the use of convexity to prevent faecal pooling onto the peristomal skin, and the use of a skin barrier wipe, the patient had been troubled with peristomal skin complications since his stoma formation.

Interventions

The patient presented to his local stoma care clinic with an exacerbation of his peristomal skin complication and granulomas around his stoma (Photo 1). The granulomas were treated with a cauterising agent and a two-piece **CeraPlus** convex pouching system was fitted.

Outcomes

The patient was reviewed in clinic two weeks later. His peristomal skin complications had dramatically improved and he was overjoyed to not feel the discomfort of the constant peristomal skin irritation (Photo 2). The two-piece CeraPlus convex skin barrier was staying in place for 3-4 days and the pouch was changed every 2 days, the skin barrier wipe had been discontinued. The patient felt his quality of life had substantially improved; he was sleeping better at night and was beginning to enjoy returning to his normal activities.

From a cost-effective perspective the patient was changing his original one-piece convex pouching system once a day with the additional use of a skin barrier wipe. Using the two-piece CeraPlus convex pouching system as part of his overall ostomy management helped decrease the cost of his supplies and care.

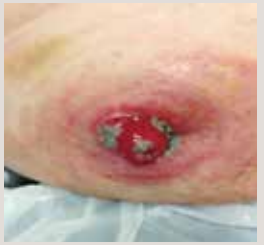

Photo 1 Irritated peristomal skin in the area underneath the skin barrier.

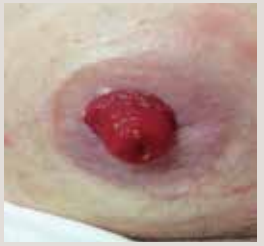

Photo 2 Improvement seen to the peristomal skin after using the CeraPlus skin barrier for two weeks.

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Use of **CeraPlus** skin barrier on a patient with an ileostomy due to ulcerative colitis

Patient Overview
The patient is a male in his 60s who has an ileostomy due to Ulcerative Colitis.

Problem
Following an appointment with a Dermatologist, for an exacerbation of Pemphgoid, this patient requested an urgent appointment with the stoma care nurse. Pemphigoid is an autoimmune disease that affects the skin. It begins with an itchy erythematous rash that can develop into fluid-filled blisters over a period of weeks to months. Blisters can develop at sites of skin trauma such as peristomal skin that is subject to repeated removal of an adhesive skin barrier.[1] The patient had developed blisters all over his body, including under his ostomy skin barrier. Upon assessment it was noted that the blisters had opened and the peristomal skin was very moist. This was making adhesion of the skin barrier extremely difficult and required the patient to change his pouching system 2-3 times a day. Prior to developing this skin condition, the patient was changing his one-piece standard wear cut-to-fit flat pouching system every 1-2 days.

Interventions
The decision was made to try a two-piece **CeraPlus** cut-to-fit flat skin barrier, and the results were most favorable. Not only did the pouching system stay in place for 4 days, there was a noticeable difference in the condition of the peristomal skin (Photo 1). The patient was also seeing a Dermatologist who was managing the pemphgoid with an oral steroid.

Outcomes
The condition of the peristomal skin continued to improve over the next month with the use of CeraPlus (Photo 2). The patient commented that both the skin barrier and adhesive were comfortable against his skin.

The patient continued to see the Dermatologist and the condition of his peristomal skin continued to improve over the next 6 months (Photo 3). The patient was on a daily maintenance dose of an oral steroid. A possible side effect of steroid use is thinning of the skin. The patient was aware of this and used an adhesive remover wipe when removing his pouching system.

1. Al-Niaimi, F., & Lyon, C.C. (2010). Pre-existing and coincidental skin disease. In Lyon, C.C., & Smith, A. (Eds.), *Abdominal Stomas and Their Skin Disorders: An Atlas of Diagnosis and Management.Second Edition* (158-161). UK: Informa Healthcare

Contributing Author and Affiliations

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Photo 1 Improvement seen to the skin after using the CeraPlus skin barrier for 4 days.

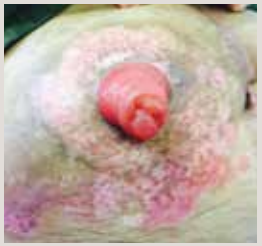

Photo 2 Improvement seen to the peristomal skin after using the CeraPlus skin barrier for one month.

Photo 3 Improvement seen to the peristomal skin after using the CeraPlus skin barrier for 6 months.

Notes

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Case Study

CeraPlus Skin Barrier

Colostomy

Use of a Ceramide Containing Skin Barrier with Irritated Peristomal Skin

Abstract:

There is a high incidence of peristomal skin complications, with more than half of all people living with an ostomy experiencing a peristomal skin issue at some point in their lifetime[1]. The types of complications, the reasons for them, and the solutions used to treat them can vary widely. For clinicians, managing these peristomal skin complications takes time and effort. For patients, sore peristomal skin can impact their quality of life. Peristomal skin complications are the most common post-operative complication following creation of a stoma[2]. One such story will be shared in this case study.

Aim:

To restore and maintain peristomal skin integrity by finding a suitable skin barrier formulation for the patient, and ensuring a proper skin barrier fit around the stoma.

Setting:

The patient was admitted to the hospital for an emergency colostomy and Hartmann's procedure in August of 2015 for a diverticular stricture.

Patient Overview:

The patient is a 67 year old male who leads an active life, and is in good health. He has no co-morbidities or known allergies. He was placed on a standard wear skin barrier with no tape post operatively in the hospital, and continued on this product following discharge home.

Problem:

Within a few weeks, despite having no problems with leakage or any signs of Peristomal Moisture Associated Skin Damage (PMASD), the patient started showing signs of peristomal skin irritation in the area underneath the skin barrier (Photo 1). The patient made an urgent call complaining that his skin was red, itchy, and sore. He also complained that his pouch was not adhering and that he was becoming increasingly concerned of a pouch failure in public.

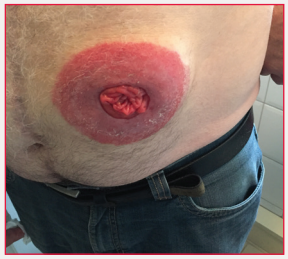

Photo 1 Irritated peristomal skin in the area underneath the skin barrier.

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Interventions:

The patient was asked to switch to a Hollister SoftFlex skin barrier for its gentle properties. A skin swab was taken for a microbial culture and sensitivity test. No significant growth was detected, and the results were negative for Methicillin-resistant Staphylococcus Aureus (MRSA). Within a few days, the peristomal skin started to show improvement. The pouch was showing good adhesion, and the red and sore skin started to improve. However, the itching continued and was interrupting his sleep so 0.1% topical steroid, prescribed by a General Practitioner, was commenced (Photo 2).

After another week the peristomal skin showed further improvement and the General Practitioner recommended the patient discontinue the topical steroid. Unfortunately, his skin became inflamed again and increasingly itchy and irritated. This required the use of an anti-inflammatory medication for pain relief. The topical steroid was not reinstituted by the General Practitioner, as it is not to be used as a long-term treatment. The patient was then switched from the Hollister SoftFlex skin barrier to the Hollister CeraPlus skin barrier.

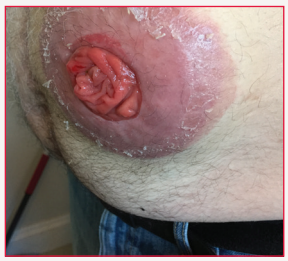

Photo 2 Some improvement seen with a change in skin barrier, and the application of a topical steroid.

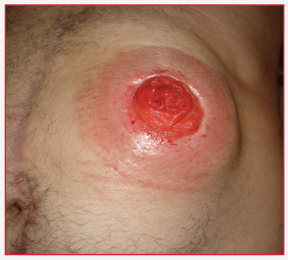

Photo 3 Further improvement seen during use of the CeraPlus skin barrier.

Outcomes:

Within 2 days of changing to the CeraPlus skin barrier, the patient indicated that the irritation and itching of his peristomal skin had stopped. He no longer required an anti-inflammatory medication for pain relief. (Photo 3).

Conclusion:

This case was challenging for several reasons. While a good fit around the stoma was achieved with each of the different skin barriers tried with no evidence of leakage, the patient was experiencing irritation and itching of the peristomal skin. Many people with ostomies experience peristomal skin issues and accept them as a normal aspect of having a stoma; despite pre-and post-operative information they are given[3]. Thankfully, this patient sought help and the problem was resolved. Achieving a good fit around the stoma and preventing leakage as a means of mitigating skin irritation may not be enough to keep the peristomal skin healthy. The formulation of a skin barrier also has an impact on the health of the peristomal skin. Finding the right combination of skin barrier formulation, and skin barrier fit is essential to maintaining a healthy peristomal skin environment.

Author and Affiliations

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References:

1. Nichols, *Hollister Ostomy Comprehensive Health and Life Assessment* study.
2. Søren Meisner,Paul-Antoine Lehur,Brendan Moran,Lina Martins, Gregor Borut Ernst Jemec PLoS One *Peristomal Skin Complications Are Common, Expensive, and Difficult to Manage: A Population Based Cost Modeling Study* 2012; 7(5): e37813.
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