

# CASE SERIES **Positive Outcomes Caring for Peristomal Skin Complications**

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# PROBLEM

Three patients presented with peristomal skin complications resulting from prolonged peristomal skin moisture. These complications reduced the patients' quality of life and contributed to pouch system failures. Case 1: A 64 yr.-old female, with an ileostomy for 2 years, developed peristomal pyoderma gangrenosum, accompanied by painful, weeping ulcers. Case 2, an 81 yr.-old male with an ileostomy for 23 years due to colon cancer, developed a peristomal fungal infection and suffered constant peristomal skin burning, itching and weeping. Case 3, a 69 yr.-old male, with a colostomy for 3 months, diagnosed with colon cancer, developed painful peristomal moisture associated dermatitis, accompanied by skin blistering and weeping as a result of stool leakage.

### **PAST MANAGEMENT**

Past unsuccessful peristomal skin management included: Case 1: for 3 weeks a skin barrier powder and a hydrocolloid were applied followed by a convex precut 2 piece pouch with a belt. Pouches were changed daily due to leakage from the weeping ulcers. She was also on prednisone 20mg daily for pyoderma treatment; Case 2: an anti-fungal powder was applied every 3 days for 2 weeks with pouch changes. A convex cut-to-fit 1-piece pouch with a belt was placed over the peristomal skin and stoma. Case 3: for 1 week, a stoma barrier powder and a liquid skin protectant were applied to the peristomal skin, including skin barrier paste around the colostomy. A moldable wafer, cut-to-fit, 2 piece pouch was placed over the stoma and dressing. Pouches were changed daily when skin irritation was present; otherwise, they were changed every 2 days.

## RATIONALE

Standard polymeric membrane dressings were applied to the peristomal skin of cases 1 and 3. Silver polymeric membrane dressings were applied to the peristomal skin of case 2. Polymeric membrane dressings help reduce inflammation, pain and swelling associated with tissue damage. They contain unique components that work together to fill, absorb, cleanse, and maintain optimal moisture levels. The dressings have also been shown to help reduce the risk of maceration. The silver containing dressings have the additional anti-microbial benefits of small particle silver to help protect Polymeric membrane dressings rapidly healed the peristowounds from microbial contamination. The dressings contain absorbing agents that draw and lock the exudate into the dressing. The absorbency of the dressings helps prevent the exudate from pooling and leaking out of the dressing, which minimizes maceration and the breakdown of the peristomal skin. Polymeric membrane dressings inhibit the free-nerve ending response at the application site, which often results in dramatic decreases in pain, swelling and inflammation. It

is believed that the dressings absorb sodium ions from the skin and from the exposed wound tissue which reduces inflammatory nerve conduction. The glycerol in the dressings helps keep the wound bed moist while minimizing the dressing adhering to the wound bed. Adherence of a dressing to the wound bed during removal disrupts new tissue, causing the inflammatory process to be reactivated, resulting in additional pain and swelling. Polymeric membrane dressings contain a nonirritating cleanser that continually cleanses the wound so manual cleansing is usually not needed at dressing changes. Polymeric membrane dressing components synergistically facilitate enhanced autolytic debridement directly by loosening the bonds between the slough and viable tissue in the wound bed. The liquefied slough is absorbed by the dressings.

# **CURRENT CLINICAL APPROACH**

For case 1, the polymeric membrane dressing was cut in half, then in a crescent shape to fit around the stoma, and then applied on the peristomal skin. For case 2, the silver polymeric membrane dressing was cut in the shape of a ring, with a hole cut to fit the size of the stoma and applied over the affected peristomal skin. The edges of the dressing were covered with wafer (secured with tape). For case 3, the polymeric membrane dressing was cut to fit over the affected area and secured with the pouch wafer. No additional skin barrier products or powders were used. All cases continued with the pouching systems they used with prior management

The comparisons made with previous management approaches were: 1. number of pouching system changes; 2. skin barrier products or powders used; 3. pain management; 4. erythema, inflammation and edema; 5. savings in time and supplies used; 6. ease of use; 7. quality of life; 8. healing.

Following the facility's protocol, all peristomal skin was cleansed with normal saline prior to each dressing change. Dressings were changed per the polymeric membrane dressing change instructions.

## **PATIENT OUTCOMES**

mal skin of all 3 patients. Case 1, in 3 weeks, previously used 25 pouch system changes and 15 hydrocolloid dressings combined with a skin barrier powder. When the polymeric membrane dressings were applied only 13 pouch system changes were used in 6 weeks and the hydrocolloid dressing and skin barrier powder were eliminated. The patient's pain decreased from 8 to 0 (0-10 scale). She needed to take pain medications only at night and by week 3, discontinued pain medications altogether. Her prednisone was gradually weaned off. Erythema, inflammation and edema from the pyoderma were resolved after 3 dressing changes. Due to fewer pouch changes, there was cost savings in time and supplies used. Only 6 polymeric membrane dressing were used. The patient found the dressings very easy to use and the patient's quality of life improved. The patient was able to go out of her home without the fear of leakage. Case 1's skin healed in just 6 weeks. Once she healed around the stoma, the polymeric membrane was applied, as needed, to help with pain in the healed areas, resulting from pyoderma.

Case 2 utilized 4 pouch system changes in 2 weeks with the past management. An anti-fungal powder was applied with the prior management and discontinued with the application of the polymeric membrane dressings. Silver polymeric membrane dressings were applied to help manage the fungal infection; the patient utilized 2 pouch system changes in 1 week. With the previous approach, the patient experienced burning and itching due to the fungal infection. The discomfort was eliminated in only 1 hour after the silver polymeric membrane dressing was applied. The peristomal skin erythema and weeping was resolved after 1 dressing change. There were fewer pouch changes over the course of healing and therefore a cost savings in supplies and time. Only 2 silver polymeric membrane dressings were required to resolve the peristomal skin problems. The patient found the dressings very easy to use. With past management the patient was unable to go out due to leakage of the appliance and weeping skin; but, once the silver polymeric membrane dressings were applied he was able to go out, without any problems. Case 2's skin healed in 1 week.

Case 3 had daily pouch system changes with a stoma barrier powder and a liquid skin protectant applied to the peristomal skin, including skin barrier paste around the colostomy, for 1 week. Once the polymeric membrane dressing was applied, only 3 pouch system changes and 3 polymeric membrane dressings in 2 weeks were needed and the stoma barrier products were eliminated. Case 3's pain decreased from 6 to 0 (0-10 scale). The erythema and weeping was resolved in 2 weeks after the polymeric membrane dressings were initiated. There were fewer pouch system changes and supplies used, so there was a cost savings in supplies and time. The patient found the dressings very easy to use. The patient was very active before he experienced the peristomal skin problems; once the polymeric membrane dressings were applied, there were no further problems of leakage and the patient became much more active, resuming normal activities. Case 3's peristomal skin healed in 2 weeks.





### Polymeric membrane dressing initiated

- \* Wound Measures: 2.2cm x 0.5cm x 0.2cm

- \* Pain 8 (0-10 scale)



- satellite lesions
- \* 10.0cm x 10.0cm c 0.1cm
- \* Drainage serous and scant
- \* Stoma retracted
- \* Patient experiencing burning and itching

# **Comparison of pouch changes with past management** and polymeric membrane dressings

Number of pouch changes with prior management Note: None healed	Average number of pouch changes per week with pri- or management	Number of pouch changes with polymeric membrane dressings Note: All healed at endpoints below.	Average number of pouch chang- es per week with polymeric mem- brane dressings	Percent sav- ings in number of supplies used
25 in 3 weeks	8.3	13 in 6 weeks	<b>2.16</b>	74% savings, no ongoing expenses
4 in 2 weeks	2	2 in 1 week	2	No savings but no ongoing expenses
7 in 1 week	7	3 in 2 weeks	1.5	78% savings, no ongoing expenses

# **CASE 1 - PYODERMA GANGRENOSUM ULCER**

\* Ulcer draining large amount of serosanguineous exudate \* Erythema, inflammation, and edema of peristomal skin \* Stoma prolapsed and retracts with movement



- \* Ulcer measures: 1.5cm x 0.6cm x 0.2 cm
- \* Drainage moderate
- \* 100% Granulated peristomal skin
- \* Pain 5 (0-10 scale)





### Polymeric membrane dressing initiated

- \* Peristomal skin with erythema and weeping and open blisters
- \* Wound measurement: 9.0cm x 4.0cm x 0.1cm
- \* Drainage serous and scant
- \* Stoma prolapsed and retracts with movement
- \* Pain 6 (0-10 scale)

Silver Polymeric membrane dressing initiated

\* Area of peristomal skin with fungal infection, erythema and



Day 7

<sup>\*</sup> Fungal infection and erythema resolved. \* Note: superior redness in picture is an area not covered with polymeric membrane dressing

### **OBJECTIVES**

1. Discuss how polymeric membrane dressings provide an optimal wound healing environment and quickly resolve peristomal skin complications.

2. When decreasing or eliminating wound pain is a goal, consider the benefits of using polymeric membrane dressings, which are non-adherent and can inhibit the nociceptor response.

3. Consider the use of polymeric membrane dressings to save costs of supplies and time.

4. Discuss how polymeric membrane dressings have improved the quality of life of the patients.



\* Ulcer measures: 1.2cm x 0.5cm x 0.1cm \* Pain 0 (0-10 scale) \* 35 days later, ulcer closed

Day 14



- \* Erythema resolved, scant serous fluid.
- \* Pain 0

Day 7

- \* Wound measurement, taken 3 days later:
- 3.0cm x 2.0cm x 0.1 cm
- \* In just 14 days the peristomal moisture associated dermatitis was resolved.

## CONCLUSIONS

**Polymeric membrane dressings not** only healed the peristomal skin but the dressings were easy and convenient for the patients' to use. All 3 individuals experienced improved quality of life. Case 1 and 3 were no longer home bound. Additionally, the use of polymeric membrane dressings saved both time and supply costs.

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