Use of a Two-Piece Soft Convex Skin Barrier to Aid Overall Security and Skin Health with a Challenging Patient

Jolanda Janse Van Noordwyk, RN, STN and **Debra Letcher**, RN, STN, Gauteng, South Africa

Abstract

"Do not focus on problems; focus on solutions!" - Dr. Mansur Hasib.

This case study exemplifies this quote. From the outset our patient was faced with many challenges early in her journey that required not focusing on the problems both the patient and clinician were facing, but to assess and deliver creative solutions from the very beginning. A more proactive approach to stoma care can help improve patient outcomes rather than the traditional reactive approach.[1] This management method can help reduce peristomal skin issues before they occur.

Background & Surgical History

Mrs. N (patient initial changed to protect privacy) is a sixty-six-year-old female who presented with recurrent cystitis. She has no known comorbidities, and otherwise in general good health. Her general practitioner referred her to a urology specialist for further investigations. A CT scan was performed that revealed carcinoma of the bladder and a uterine metastasis. Her prognosis at that point was positive in that surgical resection and adjuvant therapies could achieve a curative result.

She underwent a laparoscopic radical cystectomy, hysterectomy, and pelvic node dissection. Her adjuvant therapies included both chemotherapy and radiotherapy. A multidisciplinary team approach was implemented which included the surgeon, dietitian, oncologist, and stomal therapy nurse (STN). The STN role helped to reinforce her pre-operative education, stoma site marking, and follow through with post-operative care and counselling. Stoma siting was challenging as she had uneven abdominal topography, a larger pannus, and a very soft abdominal tone. To help ensure a more positive outcome, the decision was made to site the stoma on the upper right quadrant for better positioning for visualisation for the Mrs. N after surgery.[2]

Mrs. N has an active lifestyle, is married with two children, and employed as an accountant. She was very anxious pre-operatively as well as post-operatively regarding her situation and condition.

Challenges

Despite undertaking the stoma site marking process, both the urostomy construction and location post-operatively was less than ideal. Dense abdominal tissue made exteriorisation of the stoma by the surgeon very difficult, resulting in limited stomal protrusion (or spout) of only 0.5cm, and located within a skin fold. *(See Figure 1)* For improved patient outcomes, it is generally recommended that stomas of this nature be well spouted – approximately 20-25mm above the skin surface.[3] This scenario created multiple issues such as sourcing a suitable pouching solution to meet her needs. Consequently, this only contributed further to her anxiety.

The 'stent' that was visible post-operatively was not a standard stent we usually observe in our practice and resembled a thicker tube that was singular rather than the obvious dual fine-bore stents usually associated with one per ureter exiting the stoma. *(See Figure 2)* However, the patient reported she also had an existing internal stent in her right kidney. There was concern of accidental dislodgement of such a thick tube. On initial review, her stoma measured 34mm, was red and moist, poorly protruding as described previously, with an intact mucocutaneous junction. Her output was straw-coloured urine.

From a psychosocial perspective, Mrs. N expressed initial shock at her diagnosis and appeared quite traumatised. She discussed her health and potential death and was often very emotional. Even after one month, she continued to ask, 'could they have tried something else?' Her family were supportive but did rely heavily on the advice and encouragement from the STN services.

Figure 1 Poorly spouted urostomy in a deep skin fold. Initial post-operative review.

Figure 2 Close up view of urostomy with drain tube in-situ.

Figure 3 PMASD from leakage of urine

Figure 4 Stent removed after seven days. Note appearance of peristomal skin.

continued over page

Use of a Two-Piece Soft Convex Skin Barrier to Aid Overall Security and Skin Health with a Challenging Patient

Nursing Interventions

Understanding the unique nature and potential problems that patients with a urostomy face is important from the outset. This knowledge can help decide proactive solutions earlier in the patient's journey. Urostomy patients are often at higher risk of leakage given the nature of the output being liquid. Urine by its very nature can channel quickly into any gaps under a skin barrier and undermine the adhesive. As such, with leakage, peristomal moisture associated skin damage (PMASD) is of particular concern which could impact skin health due to the excess moisture.[4] Excessive moisture can lead to maceration, skin breakdown, and fungal conditions. Also, a urostomy can place people at higher risk of urinary tract infection (UTI).[5]

Urostomies are usually permanent and chronic exposure to peristomal skin by urine, can lead to longer term issues including hyperkeratotic skin conditions such as pseudoverracous lesions (PEH).[4] Security from a reliable fit is another critical consideration. Additionally, volumes of liquid can decrease the overall longevity of a skin barrier. As such, convexity is usually a 'go to' product for urostomy patients due to the liquid nature of the output, and recent consensus paper supports this model of care.[6]

Mrs. N began her journey using a one-piece soft convex urostomy pouch with an Adapt™ convex barrier ring, and Flextend™ skin barrier sheets. These were originally chosen for their high erosion resistance and shape. It was important that urine did not leak onto peristomal skin and creating a 'wall' using rings with a convex skin barrier was thought to provide sufficient absorption, depth, compressibility, and flexibility to match her peristomal topography. Understanding these convex characteristics and matching them to a patient's shape is helpful in guiding to the right solution.[7] Unfortunately this was unsuccessful resulting in some mild PMASD after 24 hours. *(See Figure 3)* It became obvious the tension location was close to the stoma when it might have been better farther out. When sitting, her stoma was disappearing further as there was excessive skin tissue from above the stoma (an 'overhang') that required smoothing. A wider plateau in the convexity was then considered.

A cut-to-fit soft convex CeraPlus™ skin barrier* (57mm ring) was subsequently chosen to provide both correct tension location and support healthy peristomal skin. This resulted in no reported leakage after seven days and Mrs. N was coping very well with the new pouching system. At this point, her stent was removed as per the urologist as well as the mucocutaneous sutures which were causing her pain and discomfort. Her peristomal skin appeared visually improved. *(See Figure 4)*

Mrs N. was progressing well overall, however soon after, she reported foul-smelling urine with pain around her lower back and her urine appeared to be a dark colour. A UTI was suspected and after referral to her local doctor this was confirmed, and treatment for her UTI was commenced. Unfortunately, this did not resolve the issue and a few weeks later she presented to hospital with both visible blood and pus mixed with haematuria (bloody urine). *(See Figure 5)* The urologist was contacted, and she was admitted for intravenous antibiotics and removal of the renal stent. She had also lost 25kg in weight creating further peristomal skin topography challenges necessitating the addition of an Adapt ostomy belt. *(See Figure 6)* While in hospital, she was switched to another manufacturer as her inpatient unit did not have access to her current products. This system however leaked constantly creating fresh anxiety.

Reverting to her CeraPlus™ product, the leakage ceased, and it was noted the soft convex two-piece skin barrier was still meeting her needs despite dramatic changes in her peristomal planes. We felt this was due to the overall characteristics of the soft convex skin barrier. The compressibility of the dome ensured adequate support and tension to the immediate peristomal skin. The overall flexibility of the product was essential in conforming to these changes and visually, the adhesive border mimicked the peristomal planes very well. *(See Figures 7 & 8)* Additionally, the floating flange and soft coupling ring were also very flexible contributing to a complete convex solution for this patient.

Mrs. N's skin appeared healthy most of the time when she was using the CeraPlus™ skin barrier. *(See Figure 9)* She did develop over a short period a small peristomal defect that was managed easily with a slim Adapt CeraRing™ barrier ring, and some Adapt stoma paste. *(See Figure 10)* This system provided seven days wear time promoting skin health, cost effectiveness, and importantly feelings of confidence and security for the patient. *(See Figure 11)*

Figure 5 Gross haematuria visible in the urostomy pouch.

Figure 6 Substantial weight loss leading to significant abdominal topography changes.

Figure 7 The flexibility of the skin barrier in conforming to the peristomal contours.

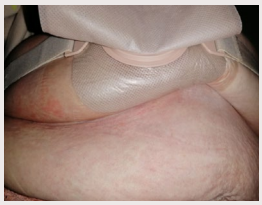

Figure 8 Note the adhesive border mirroring the peristomal topography.

continued over page

Use of a Two-Piece Soft Convex Skin Barrier to Aid Overall Security and Skin Health with a Challenging Patient

Conclusion

Peristomal complications are not necessarily inevitable. While this patient was well sited pre-operatively, the resulting stoma formation was less than adequate. Often, patients with such challenging peristomal planes and stoma construction are destined to have frequent issues with leakage, impacting their confidence and skin health. Proactively evaluating the patient needs and deciding on a solution that would best match this patients' needs from this assessment is pivotal in achieving the goals of care for the healthcare professional. These goals include maintaining healthy peristomal skin from day one by choosing a skin barrier that supports skin health, minimising the potential for leakage by providing a secure product, and providing the simplest solution for the patient to manage selfcare efficiently so they can return to their lifestyle as quickly as possible. Such positive outcomes can be achieved with clinician knowledge when matching patient needs to the products found in their armamentarium.

Figure 9 Peristomal skin appears visibly healthy.

Figure 10 Small inferior skin defect appearing with some exposed skin.

Figure 11 Final pouching system in place.

To learn more about CeraPlus™ Products, click here or scan QR code

To visit the Hollister website, click here or scan QR code

To visit the Hollister Clinical Education Website, click here or scan QR code

References

1. Purnell, P 2012, 'Proactive Decisions vs. Reactive Responses', *World Council of Enterostomal Therapists Journal*, Supplement, vol. 32, p17-18.
2. Salvadalena, G et al., 2015, 'WOCN Society and AUA Position Statement on Preoperative Stoma Site Marking for Patients Undergoing Urostomy Surgery', *Journal of Wound Ostomy Continence Nursing*, vol. 42, no. 3, pp. 253-256.
3. Strong, SA 2016, 'The Difficult Stoma: Challenges and Strategies,' *Clinical Colon & Rectal Surgery*, vol.29, no. 2, pp. 152-159.
4. Brogna, L 2021, 'Prevention and Management of Pseudoverrucous Lesions: A Review and Case Scenarios', *Advances in Skin & Wound Care*, vol.34, no. 9, pp. 461-471.
5. Tanna, RJ, Powell, J & Mambu, LA 2021, 'Ileal Conduit', *StatPearls Publishing*.
6. Hoeflok, J, Salvadalena, S, Pridham, S, Droste, W, McNichol, L & Gray, M 2017, 'Use of convexity in ostomy care – Results of an international consensus meeting', *Journal Wound Ostomy Continence Nursing*, vol. 44, no. 1, pp. 55-62.
7. Cobb, T, Depaifve, Y, Quigley, M, McNichol, L & Smitka, K 2021, 'Characteristics of Convex Skin Barriers and Clinical Application-Results of an International Consensus Panel', *Journal Wound Ostomy Continence Nursing*, vol. 48, no. 6, pp. 524-532.

Remois

*Contains the Remois Technology of Alcare Co., Ltd.

Prior to use, be sure to read the Instructions for Use for information regarding Intended Use, Contraindications, Warnings, Precautions, and Instructions.

Disclaimer: This case study represents this nurse's experience in using the Hollister CeraPlus soft convex skin barrier and Adapt accessories with the named patient, the exact results and experience will be unique and individual to each person.

CE

Hollister

Hollister Incorporated
2000 Hollister Drive,
Libertyville, Illinois 60048

www.hollister.com