

The Ongoing Journey to Skin Health and Improved Quality of Life – A Patient-Nurse Collaboration

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Abstract

Each ostomy patient can face unique challenges on their recovery journey after surgery. Some patients are unfortunate to endure not only multiple challenges, but also lengthy periods managing them until they find the solution that best meets their needs. This case follows a seven-year journey of a man with a zest for life whose challenges since urostomy formation have afforded him many setbacks. However, through persistence, creativity, and in the end, gaining access to a product that fulfilled his needs, the right solution was found that achieved his expectations around what quality of life (QoL) meant for him.

Introducing Our Person

Mr. Charles Nesbitt is a sixty-nine-year-old male from South Africa who has spent 35 years with a leading retail organization and is married with two children and one grandchild. He is an avid cyclist having completed 25 Cape Argus Tours (the world's largest cycle race and 109 km long)¹ and two double centuries (cycle events of 200 miles in length). He is also a founding member of the Wannabees Cycle Club in Helderberg basin, South Africa. Cycling is clearly a passion and an important activity for his psychological well-being, social connectivity and thusly, QoL. He is also the published author of fifteen books focusing on retail fashion, planning, and buying, and is a keen bonsai enthusiast.

Background & Surgical History

Charles had controlled diabetes type 2 since his early twenties however, this has since progressed to Type 1 but is still well-controlled. He also is treated for hypertension which is also well-managed as well as documented skin sensitivities and allergies.

Charles was physically active and healthy until the age of sixty-two when he retired seven years ago and diagnosed with bladder cancer in the same year of 2014. He underwent a cystectomy and formation of urostomy soon after. Post-operatively his stoma was well-fashioned with good protrusion and size and remained that way for the last seven years.

Challenges

Charles experienced several challenges, sometimes years long, throughout his journey. These are outlined here and how these were addressed are outlined individually.

Challenge 1:

Firstly, he suffered from ongoing skin irritation that would not resolve and later he developed some skin ulceration and erosion. (See Figures 1 & 2) Despite a secure skin seal around his stoma, his skin still suffered and appeared red and moist, resembling the footprint of the skin barrier. This irritation appeared to relate to two causative factors, sensitivity to the skin barrier components and exposure of urine to his peristomal skin.

Challenge 2:

Charles experienced frequent leakage for the first 2-4 years, predominantly during the night where the night drainage bag would disconnect leading to disrupted sleep and frustration.

Challenge 3:

Additionally, for the first few years after surgery he experienced frequent urinary tract infections (UTIs) that were difficult to manage.



Nurse Lidia Krijt RN STN



Patient Mr. Charles Nesbitt



Figure 1 Peristomal skin irritation in the outline of the barrier footprint



Figure 2 Skin ulcer and damaged appearance

LEVEL OF EVIDENCE - CASE STUDY

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Interventions – Challenge 1

To address his skin issues, several products from different manufacturers were evaluated and various prescription creams and barriers were applied, but often these aggravated his skin condition, resulting in painful, broken, and bleeding skin. A two-piece ceramide infused skin barrier - a CeraPlus™ skin barrier*, that was recently introduced into South Africa was not available for the early part of his journey. Ceramide is a lipid that is found naturally in the outer layers of skin – specifically in the epidermis.² The primary role of ceramide is to link the cells of the epidermis together and form a protective barrier against moisture loss. This is often described as the skin resembling a brick wall where a strong wall needs bricks and mortar to hold together. In the skin, the cells are the bricks and the lipids, including ceramide, are the mortar that fills in the spaces and helps hold skin together.³ After gaining a greater understanding of the properties and benefits of ceramide, it was determined that a ceramide infused skin barrier might be the solution to address his challenges.

As his stoma was well-spouted, it was decided that the ongoing use of a flat skin barrier would best suit his needs for overall comfort and flexibility compared with a convex skin barrier. Firstly, attempts were made to shape the skin barrier opening slightly larger around the stoma to help it face downwards in the pouch and assist with gravity drainage, however, leakages continued. After some persistence it was found that the best solution was to trim the skin barrier opening to fit as snugly as possible around the stoma and add a ceramide infused accessory, an Adapt CeraRing™ barrier ring. (See Figures 3 & 4) As his peristomal skin was moist, Adapt™ stoma powder (See Figure 5) was used prior to the application of the barrier ring and the skin barrier to absorb this excess moisture to help ensure secure adhesion once his pouching system was applied. The corresponding urostomy pouch was connected to the skin barrier and an Adapt ostomy belt was added to help provide a feeling of additional security. (See Figure 6)

Interventions – Challenge 2

‘Necessity is the mother of invention’ is a well-known proverb and accurately defines the solution that met Charles’ needs. After numerous attempts at different commercially available products and methods it was found the use of most night bags available to Charles were problematic as there were times when what he described as an ‘airlock’ developing in the tubing with disastrous consequences from urine not being able to flow. Sometimes this ballooning effect of pooling urine at the pouch level could be relieved by ‘burping’ the system to allow the introduction of air. (See Figure 7) This involves releasing the two-piece flange connection from the top of the system for a brief period.⁴ While this was possible during waking hours, it poses greater challenges when one is sleeping.

Charles, solution to the commercially available options, was to improvise with a custom-built, collection kit for home and travel. This system worked well for him in this case.

Interventions – Challenge 3

Concerning his recurrent urinary tract infections, a stricter prevention and maintenance regime was adopted given the evidence supporting the high risk of UTI development for those in Charles’ situation. Firstly, people suffering from diabetes are at greater risk of developing UTIs.⁵ Additionally, people who have had urostomy surgery are also at greater probability of developing UTIs.^{6,7} This combination of risks meant a proactive approach to UTI prevention was necessary considering his history of recurrent UTIs.

Maintaining high standards of general hygiene is a common-sense approach with correct hand washing techniques, particularly when it was pouching system change time. Multiple UTIs are a reported complication for around 17% of patients following radical cystectomy and urinary diversion.⁸ Regular urine lab stick testing can be a method to detect infection early, however most urinary diversions will develop some asymptomatic bacterial colonisation not warranting antibiotics.⁸ However, it was felt that given Charles’ situation it would be prudent to take additional precautions, as well be aware of signs and symptoms that might indicate UTI. His peristomal skin was cleaned thoroughly with appropriate cleansers (avoiding fragranced soaps or products that leave residue) and clean water. The pouch was recommended to be emptied when a third to half full to avoid overfilling and potential backflow of urine.



Figure 3 Skin barrier in position



Figure 4 Adapt CeraRing barrier ring



Figure 5 Adapt Stoma Powder



Figure 6 Urostomy pouching system with ostomy belt in place

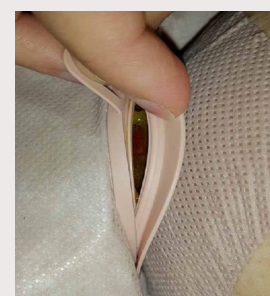


Figure 7 Burping the two-piece system

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Routine pouching system change was also recommended, and in Charles' case, at least twice per week to reduce the potential for bacterial overgrowth in the pouching system. He was advised by his management team as part of his overall care plan, to drink enough water daily, 6 to 8 glasses, to help flush through bacteria from the urinary system.⁹ Lastly, as part of general hygiene, all night drainage systems, such as night bags, leg bags, or containers should be kept as clean and free flowing as possible to avoid pooling and build-up of bacteria on the internal surfaces.

Patient Outcomes

Within nine days of using the new pouching system, his peristomal skin appeared markedly improved visually. (See Figure 8) The skin barrier when examined after removal showed no evidence of leakage which was very satisfying for Charles to see. (See Figure 9) On occasion, Charles would revert to his previous pouching system out of habit, but his skin condition would deteriorate rapidly only to be quickly visually improved again using the CeraPlus skin barrier.

Charles' skin has vastly improved as well as his overall feelings of comfort and security. The elimination of repeated leakage has provided him with additional feelings of confidence and a 'can-do' attitude. His favourite pastime, cycling, is back firmly on his activity list and he is now routinely cycling around Cape Town again, meaning his QoL has also been positively impacted. (See Figure 10)

Conclusion & Reflection

While the trial-and-error methodology is often used in stoma care, it should not be the way to practice our care on patients. With knowledge and evidence to support our decisions, coupled with knowledge around the right product solutions and new advances in technologies that support skin health, our stoma care practices can only evolve to the benefit of our patients. This case was a an example of people on both sides of the health continuum working collaboratively to achieve one of the core goals of stoma care – that of positively impacting people's quality of life.



Figure 8 Skin visually improved after 9 days



Figure 9 Skin barrier and ring intact demonstrating good absorption and no leakage



Figure 10 Charles back to his favourite pastime



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

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Disclaimer: This case study represents this nurse's experience in using the Hollister CeraPlus skin barrier with an Adapt CeraRing barrier ring with the named patient and his specific management plan. The exact results and experience will be unique and individual to each person.

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