

Can Manuka Honey be Effective in the Stoma Skin Environment?

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Introduction

Every year thousands of people undergo surgery that results in the formation of either an intestinal or urinary stoma. While advances in surgical techniques, pouching technology and STN access have led to better outcomes for this patient group, shorter hospital stays have resulted in significantly less time for patients to learn ostomy cares before discharge.

With a direct relationship between skin damage and quality of life¹, ostomy patients are dependent on the integrity of their peristomal skin to maintain a normal life.

Herlufsen et al.² found that 80% of their study co-hort (n=202) did not seek treatment for their damaged skin. They remain hidden ostomy casualties. This case study poses the question could this be prevented?

This case study will present Mitchell's stoma journey with multiple deeply eroded, ulcerated peristomal skin lesions.

Conflict of Interest Declaration nil

Disclaimer information and opinions in this case study represent the reality of my individual practice.

Who is Mitchell?

A male aged 51 years, Mitchell was born with spina bifida. Spina bifida is a birth defect in the baby that occurs when the spine and the spinal cord do not develop completely³. People with spina bifida often have an associated condition known as neurogenic bladder, which means that there is an interruption with the messages running between the nerves of the spinal cord and the bladder and the brain cannot coordinate bladder function. A urostomy is usually formed to assist with adequate urine excretion and to ensure the kidneys are protected and renal function is maintained. Mitchell has had a urostomy since he was a child. His existing, firmly rigid convex pouching system has been in use for as long as he can remember.

Mitchell is currently on a disability pension and lives with his mother. He likes to be as independent as possible and attends to most of his activities of daily living independently. Wheelchair bound Mitchell transfers independently. He enjoys watching football and is an avid Collingwood supporter.

Mitchell has had issues in the past with stoma stenosis / strictures which required dilatation and catheter insertion to ensure patency of his urostomy. This was not an issue at the time of this study and client was very reluctant to have or consider any surgical interventions at this time.

The Issue

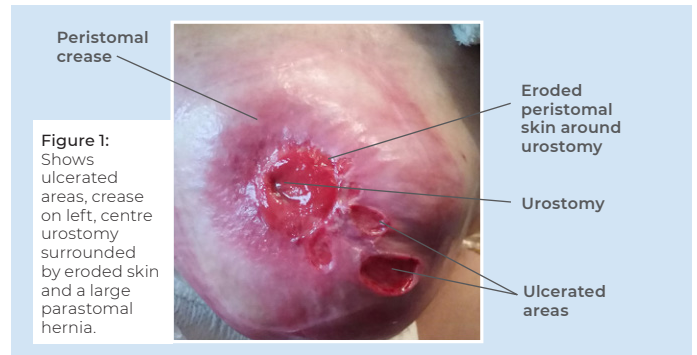
Mitchell presented seeking assistance and advice to manage recent peristomal skin breakdown which was causing significant pain. His pouching system was no longer adhering well resulting in short wear times often less than 24 hours. He found repeated leaks deeply distressing. Leaks were beginning to affect his quality of life and his ability to remain independent.

Initial Assessment

Urostomy Stoma flat 35mm round

Abdominal Contours large parastomal hernia evident

Peristomal Skin eroded with red tissue circumferentially around the entire stoma. At least five, stage 2 raw, deeply ulcerated areas are spread between the 1-6 o'clock positions and spread medially from the stoma. There is evidence of some recently healed lesions between the 9-11 o'clock positions. The entire area of the damage was in contact with the baseplate of his existing pouching system (see Fig 1).



Current Pouching Product

Long standing use of a rigid, deep two-piece convexity with tape which Mitchell stated was causing him some pain. The deep rigid convexity baseplate was putting pressure on Mitchell's abdominal wall in opposition to the internal weight caused by his hernia. Trapped between the force of the convexity and the weight of the hernia is Mitchell's abdominal wall. This pressure has likely been a contributing factor in the development of the ulcers. The shearing forces on his skin from this baseplate have also likely contributed to the damage.

Objectives

- Relieve the causes of pressure and heal the ulcerated peristomal skin
- Increase the wear time and prevent leaks
- Put in place a hernia management plan

Product Selection and Rationale for Use

After a joint, collaborative consultation between myself, the community wound Consultant and Mitchell's primary community nurse we reached out to the Omnigon Territory Manager to explore the possibility of using a Manuka honey pouching system for Mitchell. It must be said that after years of using his existing pouching system Mitchell was understandably nervous, anxious and reluctant to change.

Welland Aurum Profile Pouch

While the Welland Aurum[®] Profile pouch may look like a convexity product it lacks the convexity ring to put pressure on the abdominal wall. The Welland Aurum Profile urostomy pouch is a soft, highly absorbent hydrocolloid which is ideal in the wet urostomy environment. It moulds and 3D mirror images the surface it is adhered to accommodating hernias, curves and creases and it can, if needed be applied in a concave shape.

The Welland Aurum stoma product range with Manuka honey has only five food grade ingredients reducing the likelihood of product reaction. There are no additives, preservatives, or skin stripping tackifiers which potentially contribute to skin stripping. Given Mitchell's fragile peri-stomal skin this seemed ideal for his needs.

The Welland Aurum Manuka honey range of ostomy products has shown significant success in both healing and preventing the recurrence of ulcers such as pyoderma grangrenosum in the stomal environment^{4,5,6}. Once Mitchell's ulcerated areas were healed we needed to consider the sustainability of our product choice and if prevention of a recurrence was possible.

The rationale for the selection of this product was:

- To relieve the convexity pressure caused by Mitchell's existing product.
- To prevent leaks and extend the pouch wear time.
- Increase Mitchell's comfort.



OMNIGON

Care Solutions

Welland HyperSeal® Washer with Manuka Honey

The rationale for selecting Welland HyperSeal® washers with Manuka honey was to fill the superficial peristomal creases created by the scarring from previously healed ulceration. The washer increased absorption and extended wear time as well as providing added soft protection to Mitchell's fragile peri-stomal skin. The pre-cut seals facilitated ease of use.

Acticoat

Initially, Acticoat dressing was used as a primary interface on the ulcers.

Why Use Manuka Honey Ostomy Appliances?

MAINTAIN HEALTHY SKIN

- pH balance protection
- Prevents bacteria replication
- Effective for fungal prevention
- No skin maceration

HEALING OF DAMAGED SKIN

- Antibacterial
- Anti-inflammatory
- Antioxidant
- Increased oxygen supply to healing tissue
- Wound cleaning and debridement
- Angiogenesis regeneration
- Minimises scarring
- Stimulates the release of growth factors⁶

An intact skin mantle is the single greatest protective mechanism that stomal skin can have.

While urostomy, colostomy and ileostomy output have an alkaline pH between 6-8 normal healthy skin is slightly acidic at 4-6 pH. The most common reason for stomal skin disorders is the contact irritant dermatitis resulting from exposure to alkaline effluent. Ostomy products with Manuka honey are biocompatible with skin. The addition of the Manuka honey acidic pH reduces the impact of alkaline effluent by reducing pH back to the normal acidic skin pH.

Bacteria need a pH environment of 7 to multiply⁷ with this they cannot survive. Manuka honey can be effective against MRSA, VRE, *Candida*, *Pseudomonas*, and staphylococci. *Staphylococcus* is the cause of the most commonly found skin infections.



Figure 2: 7 days use of the Welland Aurum® Profile with Manuka honey and Welland HyperSeal® washer

After 7 days of using the Welland Aurum® Profile and the Welland HyperSeal® washer the circumferential erosion around the stoma showed significant improvement reducing in area and depth with healthy tissue evident. The area was now red but mostly intact.

Of the five initial ulcerated areas only three remained unhealed and these had significantly reduced in both size and depth. To increase his sense of security Mitchell was using Elastoplast tape around the outer edges of the baseplate however, this had caused some irritation and was replaced with **Welland HydroFrames with Manuka honey**.

After his initial reluctance to change product Mitchell could see the improvement and his wear time was now an acceptable two days.



Figure 3: Day 22 showing almost complete healing.

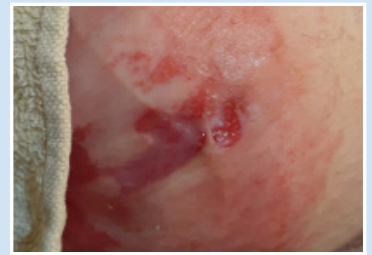


Figure 4: Day 36. Progressive healing the use of Acticoat was discontinued in favour of Aurum HyperSeal washer which was applied over the small remaining area of ulcerated skin.

Given the extent of Mitchell's hernia and the need for him to lift himself from his bed to his chair which increased his intra-abdominal pressure he was fitted with an Omnigon Isoflex support garment and instructed on its use.

Conclusion

Within 36 days of changing Mitchell from his original rigid convexity pouching system, extensive wound healing and peri-skin improvement was noted.

Mitchell continues to use the Welland Aurum Manuka honey range of products and his peri-skin has remained intact with no recurrence of the ulcers or damaged skin.

Signs of shearing have been reduced and redness continues to diminish whilst the Welland Aurum Manuka honey products continue to protect his fragile peri-skin and aid in the prevention of any further peri-skin deterioration.

Mitchell continues to wear his IsoFlex support garment when he is active and transferring in and out of his wheelchair. He commented that the support garment has increased his comfort and the feeling of "heaviness" within his abdomen has reduced.

I am confident in recommending that Welland Aurum Manuka honey products as very effective in maintaining skin integrity. They create an optimal peri-stomal environment to promote adhesion, protection skin and maximise absorption without maceration.

Mitchell continues to wear this Welland Aurum Manuka honey system and to date, has had no further evidence of any peri-skin impairment, pressure, or skin deterioration. He has been able to achieve a 2-day pouch wear time safely, predictably and with security. This has dramatically improved his quality of life. The Welland Aurum with Manuka honey pouching system has allowed Mitchell to return to independent living. He has regained confidence to return to the activities in his life that are important to him.

Follow up visit was made on 18th May 2021 and Mitchell confirmed he continues to wear this Manuka honey pouch and to date, has nil further evidence of any peri-skin impairment, pressure or deterioration.

He has now omitted the use of the Manuka honey HyperSeal as his Aurum pouch remains enough to maintain his skin integrity on its own. This has made the procedure very easy and he has regained and sustained complete independence.

References

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