

Targeted Intervention for Peristomal Skin Complications: The Role of a Hypochlorite free Pure Hypochlorous Acid Cleanser* in Modern Ostomy Care

Yvette Mier, BSN, RN, CWON, Wellstar Kennestone Regional Medical Center, Marietta, GA; Debashish Chakravarthy, Ph.D.

BACKGROUND

Peristomal Skin Complications (PSCs) are common and significantly reduce Health-Related Quality of Life (HRQoL) indicators in ostomy patients. PSCs include dermatitis, pruritus, infections, and ulcerations.

They most commonly result from chronic exposure of peristomal skin to corrosive stoma effluent. This exposure compromises the skin barrier, leading to inflammation and increased risk of infection.

Among the 1 million ostomates in the U.S., 60% report at least one PSC episode in the prior six months. This number rises to over 80% in ostomates within their first-year post-surgery.

Historically, PSC management has focused on correcting pouching problems to prevent leaks, with minimal emphasis on preventive skin care beyond cleansing with warm water and gentle appliance removal

METHODS

While proper pouch selection and gentle removal techniques remain essential in the prevention and treatment of PSCs, emerging wound care literature supports the use of a hypochlorite free pure hypochlorous acid (HOCl) wound cleanser for the treatment of denuded skin and wounds remains a primary treatment intervention. Its application to PSCs directly addresses the microbial and inflammatory components by reducing bioburden and maintaining optimal wound healing pH. As it is free from the irritant hypochlorite or bleach, we were particularly interested in the application of this pure hypochlorous acid preserved cleanser product.

This series highlights 10 ostomates with varying PSC presentations. Each patient received and was educated on peristomal skin cleansing with a soak of gauze moistened chlorite free pure HOCl cleanser for a 4-minute minimum after visible effluent was removed. Pouching issues were corrected, and gentle removal techniques were taught. This chlorite pure hypochlorous acid cleansing technique was integrated into each patient's pouching routine as standard care moving forward regardless of the presence or absence of a PSC.

RESULTS

All 10 patients experienced PSC and presented with an active clinical concern. Management included a thoughtful approach incorporating the use of a pure hypochlorous acid-preserved cleanser that was readily available for purchase in the community and through durable medical equipment suppliers where patients obtain their ostomy supplies. Resolution of PSC's resolved within 2 weeks. No recurrences or clinic visits for PSC's occurred during a 3-month follow up period. Cases 1 to 3 illustrate the resolution of the peristomal skin complications with the treatment of chlorite free pure hypochlorous acid cleanser.

The rapid release of effluent or urine during pouch changes was managed by timing the procedure in relation to the patient's previous meal and using rolled gauze or a tampon to allow adequate soak time. All patients reported that the inconvenience of a four-minute soak was a worthwhile trade-off to avoid the pain and pouching difficulties associated with a PSC.

No patients reported burning or discomfort with the use of the hypochlorite-free, pure HOCl cleanser, when compared with plain warm water. During the three-month follow-up period, there were no recurrences of PSC and no clinic visits related to PSC.

Based on these outcomes, this busy wound and ostomy center, which manages approximately 50 new ostomy patients per month, has adopted this peristomal cleansing practice as the standard of care for all ostomy patients, regardless of the presence or absence of PSC.

Case	Type of Stoma Construction	Medical History	Peristomal Rash on Admission	Pouch Leakage on Admission	Leakage Present at 2		Any Peristomal Skin Issues Within 3 Months of Discharge from Clinic
					Week Follow up Appointment	Peristomal Rash Present at 2 Week Follow up	
1	Colostomy	Ulcerative Colitis	yes	no	no	no	no
2	Ileostomy	Colon Cancer, Diabetes, Hypertension, Obesity	yes	no	no	no	no
3	Urostomy	Bladder Cancer	yes	yes	no	no	no
4	Loop Ileostomy	Ruptured Diverticulum, Sepsis	yes	yes	no	no	no
5	Loop Ileostomy	Small bowel obstruction, Obesity, Diabetes, Coronary Artery Disease	yes	yes	no	no	no
6	Diverting Colostomy	Stage IV pressure ulcer, Prolonged hospitalization secondary to trauma, Stroke	yes	no	no	no	no
7	Colostomy	Rectal Cancer, Diabetes	yes	no	no	no	no
8	Urostomy	Bladder Cancer	yes	yes	no	no	no
9	Loop Ileostomy	Colon Cancer, Hypertension	yes	yes	no	no	no
10	Loop Ileostomy	Ruptured Diverticulum	yes	yes	no	no	no

Case 1



Pre-Vashe Cleanse



Day 7



Day 21

Case 2



Day 1



Day 14

Case 3



Day 1



Day 14

CONCLUSION

Integrating a pure HOCl wound cleanser as a primary treatment for PSCs represents an evidence-based advance in ostomy care. This liquid is hypochlorite free, and hypochlorite is known to be an irritant for skin and wounds. This property could have been responsible for the positive patient experience and resolution of skin damage. This approach can lead to a healing environment, reduce discomfort, improve appliance adherence, and enhances HRQoL. Further research is needed to determine if hypochlorite free HOCl's role in PSC prevention.

REFERENCES

- Agren MS, Bjarnsholt T, Danielsen P, et al. Effect of stabilized hypochlorous acid on epithelialization and bacterial bioburden in acute wounds: a randomized controlled trial in healthy volunteers. *Acta Derm Venereol.* 2022;102:adv00727.
- Burch J, Boyles A, Maltby E, et al. Keep it simple: peristomal skin health, quality of life and wellbeing. *Br J Nurs.* 2021;30(Sup6):5-24. doi:10.12968/bjon.2021.30.Sup6.1
- Cotter JL, Fader RC, Lilley C, AHAerndon DN. Chemical parameters, antimicrobial activities, and tis-sue toxicity of 0.1 and 0.5% sodium hypochlorite solutions. *Anibicrob Agents Chemother.* 1985 Jul;28(1):118-22. doi: 10.1128/AAC.28.1.118. PMID: 3929674; PMCID: PMC176321.
- Denti FC, Guerra E, Caroppo F, Abruzzese P, Alessi F, Barone F, Bernardino P, Bergamini M, Bernardo C, Bosio G, et al. Exploring the Impact of a Structured Educational Approach on Peristomal Skin Complications: An Interim Analysis. *Healthcare.* 2024; 12(18):1805. <https://doi.org/10.3390/healthcare12181805>
- Mangum Ic, Franklin NA, Garcia GR, Akers KS, Wenke Jc. Rapid degradation and non-selectivity of Da-kin's solution prevents effectiveness of in contaminated muculoskeletal wound models. *Injury.* 2018 Oct;49(10):1763-1773. Doi: 10.1016/j.injury.2018.08.004. Epum 2018 Aug6. PMID: 30104015.
- Ortega-Pena, S., Hidalgo-Gonzalez, C., Robson, M.C. and Krotzsch, e. (2017), In vitro microbicidal, an-ti-biofilm and cytotoxic effects of different commercial antiseptics. *Int WoundJ.* 14: 470-479.

*Vashe Wound Solution, Urgo Medical North America Fort Worth, TX
Created with support from Urgo Medical North America