



A collaboration among the University of Minnesota, University of Minnesota Physicians and Fairview Health Services

The use of a pure hypochlorous acid (pHA) preserved cleanser in the management of Irritant Contact Dermatitis (ICD) in an inpatient setting.

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Introduction

Skin plays a major role in the protection of our bodies. Skin can regulate temperature, protect us from microorganisms, sense pressure and pain, and mitigate moisture in optimal conditions. When skin is exposed to prolonged moisture, especially when it is at a different pH, it can begin to degrade. Wet skin is weak skin and can lead to the development of pressure injuries.

While the use of pure hypochlorous acid (pHA) based cleanser in the management of serious wounds is evidence based and widely known, it's use for continence issues is lesser known. In one regional hospital within our system, wound, ostomy, continence (WOC) team consults include patients with varying severity of skin damage from urine and other bodily fluids. This phenomenon is now known as irritant contact dermatitis (ICD); formerly moisture associated skin damage or incontinence associated dermatitis (MASD/IAD). We describe here the extent of our usage in this common condition as such usage has not been thoroughly reported in clinical literature.

Methods

We reviewed continence consultation details of patients in a 60 day period from a small community hospital. The details of the conditions of ICD were reviewed and analyzed for our review. We noted patient demographics, associated causes of the ICD, percent of patients that received pHA treatment and length of treatment.



Irritant contact dermatitis (ICD) from G tube leak. Utilized pHA soaks and crusting/pouching at first. Pouch could not keep a seal so pHA soaks and zinc ointment utilized with absorbent pads after G tube removal. Improvement in 4 days.

Results

In a 60 day period, there were 17 consults for ICD. Eight of these were treated with pHA cleansing solution. The average length of pHA use on these patients was seven days. One outlier had been undergoing treatment with pHA for 56 days for fistula issues. One patient stated that pHA gave him a burning sensation previously so declined this treatment. The overall skin condition improved in 87% of pHA use cases. Details are presented in Table 1 of the patients we treated for ICD with pHA.



Patient was in bed for 3 days before a welfare check called. Multiple open areas, large fungal infection noted. Cleansed with pHA gauze and soaked over open wounds. Protected skin with a cyanoacrylate 3x in one week for complete healing.



Conclusion

A review of these cases showed differences in the preferred methods of treatment between the WOC nurses as there is no current practice guideline in place for these conditions and specific product use. The data also showed that the choice to select pHA was used more often for more extensive ICD with open skin. There were several items that were utilized in conjunction with pHA treatment showing that pHA can work well as a supportive treatment for ICD issues. More study is required to generate significant data. In the mean time, policy updates are warranted to improve patient experience and outcomes.



pHA chosen more often for severe ICD with significant skin breakdown



pHA chosen if suspect of fungal component



Skin breakdown soaked for 2-5 minutes. Secondary protective application most commonly used: CMC barrier cream or cyanoacrylate

References



Dx	ICD	Location	pHA Y/N	Days	Improved	No change	Decline	Other products
C Diff	Y	perineal	N	13		Y		bath wipes, Zinc/menthol
fatigue/weakness	Y	sacral	N	6	Y			bath wipes, zinc
calciphylaxis	Y	buttocks and posterior thighs	Y	10 no pHA 8 days pHA	Y - after switching to pHA	Y for first 10 days		First 10 days - bath wipes, petroleum Second 8 days - pHA, 5 layer foam dressing
Ceasoparesis	Y	G tube	Y	5	Y			pHA, cyanoacrylate
COVID	Y	coccyx, buttocks	Y	6	Y			pHA, honey gel
Hearing loss/ ETOH	Y	buttocks, upper thigh	N	5		Y		bath wipes, calmo, mentol
adenocarcinoma	Y	J tube site	Y	56	Y			pHA + cyanoacrylate; pHA + pouching; pHA + zinc gauze
Sepsis/UTI	Y	buttocks	Y	12		Y		pHA soaks, zinc/CMC
premature birth	Y	perineal	Y	7	Y			pHA soaks, zinc/CMC
premature birth	Y	perineal	Y	7	Y			pHA soaks, zinc/CMC
SOB	Y	coccyx, buttocks	Y	6	Y			pHA, 5 layer foam dressing
AKI	Y	coccyx	N	4				5 layer foam for protection
streptococcus bacteremia	Y	Buttocks	N	7	Y			Saline + cyanoacrylate and stoma powder
COVID	Y	Buttocks, at 3PI coccyx	N	12	Y			antifungal powder, zinc/menthol
fall	Y	Buttocks	N	6	Y			bath wipes, zinc/menthol
weakness	Y	perineal	N	9		Y		bath wipes, antifungal powder, zinc/CMC
OAB	Y	perineal	N	3	Y			5 layer foam, bath wipes

Table 1