

The use of a pure Hypochlorous Acid (pHA)* based cleanser in a standardized way over 5 months in an inpatient setting by a WOC nursing service. Also, what is in the canister with pHA instillation with NPWT?

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INTRODUCTION

Consensus guidelines encourage the standardized use of tissue safe cleansers that are effective in removing microbial colonies and necrotic tissue. In our inpatient practice, it is common for us to reach for a pHA based cleanser. This cleanser is applied to a wound with frequent soaks via a gauze. Another way to manage these wounds, is to use the pHA cleanser in an instillation and dwell time mode. The necrotic material is removed effectively, and its removal is evidenced not only visually in its absence from the wound, but also by the appearance of the suspended necrotic tissue in the collection canister.

METHODS

We attempted to study the “extent of usage” of pHA. Thus over a period of five months, we prospectively recorded the wound healing journey of each patient who was treated with pHA while in our inpatient care. We monitored wound progress via reduction in wound size (particularly with negative pressure wound therapy), length of therapy, and appearance of healthy granulation tissue. We present here the details of these patients and their wounds who were treated with pHA. We also present three notable cases, and also visual images of the canister contents to indicate where the necrotic matter ended up post-cleansing with pHA.

RESULTS

This study involved the treatment of 20 patients over the course of 5 months, with 3 notable cases. There were no adverse events related to product use and the case details presented showed steady healing progress with pHA. Images of the canisters show that while the necrotic tissue gradually disappeared over time from the wound, it appeared at the same time as a cloudy, suspended matter that was clearly visible in the canisters.

DISCUSSION

These observations prove that pHA with instillation works to remove necrotic tissue. It is also expected to decontaminate the wound via removal of microbial colonies. The presence of the cloudy fluid in the canisters is indirect yet a noticeable visual evidence for the removal of necrotic tissue from the wound using pHA as the wound cleansing fluid used for NPWT instillation with dwell time.

RESULTS CONT'D

Patient #	Age, Sex	Wound Location/origin	Start of Therapy	Initial measurements	Measurements at end of pHA instillation therapy	End of therapy/Outcome
1	64 yr, male	Sacrum, pressure injury	6/10/22	11.0 cm X 11.1 cm X 3.9	8.5 cm X 10.2 cm X 2.2	One week of pHA instillation, then switched to standard NPWT. Patient wound fully healed as of September 2023
2	68 yr, male	Left TMA, vascular wound	6/17/22	6.1 cm X 9.5 cm X 2.5 cm	5.1 cm X 11.8 cm X 2.0 cm	One week of pHA instillation. Return to OR and used standard NPWT. Wound with increased granulation tissue at time of discharge.
3	79 yr, female	Sacrum, pressure injury	7/13/22	6.0 cm X 6.3 cm X 2.4 cm	6.0 cm X 6.8 cm X 2.3 cm	Three days of pHA instillation, patient then went comfort care and is now deceased.
4	71 yr, female	Coccyx, pressure injury	7/13/22	1.8 cm X 3.0 cm X 2.0 cm	N/A	Three days of pHA instillation, patient then went comfort care and is now deceased.
5	83 yr, female	Right lower leg, traumatic wound	9/2/22	9.5 cm x 8.5 cm x 1.2	9.1 cm x 8.0 cm x 0.3	Four days of pHA instillation, patient then went for a skin graft with successful wound closure 9/9/22.
6	55 yr, male	Right foot, surgical wound	9/13/22	7.1 cm X 2.3 cm by 3.3 cm	6.5 cm X 2.2 cm by 0.7 cm	Ten days of pHA instillation therapy, then switched to standard NPWT. Wound is now superficial on 11/29/22.
7	69 yr, female	Right lower leg, vascular wound	9/13/22	14.5 cm x 8 cm x 1 cm	12.8 cm X 6.4 cm X 1.7	Ten days of pHA instillation therapy, then switched to alternative therapies. Wound measures 5.2 cm X 1.5 cm X 1.2 cm 12/6/22.
8	31 yr, female	Left BKA, vascular wound	9/14/22	0.9 cm X 1.5 cm X 3.5	1.2 cm X 1.4 cm X 1.6	Five days of pHA instillation therapy, then switched to standard NPWT. Wound with increased red granulation tissue.
9	58 yr, female	Right TMA, vascular/diabetic wound	9/23/22	3.8 cm x 6.9 cm x 1.2 cm	4.2 cm x 6.9 cm x 0.4 cm	Five days of pHA instillation therapy, then switched to standard NPWT. Wound smaller and more filled in.
10	70 yr, male	Sacrum, pressure injury	9/27/22	3.8 cm x 4.0 cm x 3.2 cm.	3.0 cm x 2.0 cm x 2.7 cm.	Eight days of pHA instillation therapy, wound with improved red tissue. Patient switched to alternative dressing. Patient now deceased.
11	69 yr, female	Buttocks, pressure injury	11/7/22	12.1 cm x 6.5 cm x 3.3 cm	8.5 cm x 10 cm x 2.3 cm.	Three days of pHA instillation, patient then went comfort care and is now deceased.
12	71 yr, male	Right TMA, surgical wound	11/11/22	Right Medial wound measures 1.3 cm X 2.2 cm X 0.5 cm. Right lateral wound measures 1.0 cm x 1.6 cm X 0.8 cm. Right Dorsal wound	Right Medial wound measures 1.3 cm X 2.0 cm X 0.5 cm. Right lateral wound measures 0.3 cm x 0.5 cm X 0.2 cm. Right Dorsal wound measures 0.8 cm X 2.0 cm X 0.6 cm.	One week of pHA instillation, then switched to standard NPWT. Wound beds with decreased slough tissue, smaller wound size, and less erythema to periwound space.
13	38 yr, male	Right foot, surgical wound	11/14/22	8.2 cm x 4.7 cm x 4.2 cm	8.1 cm x 5.6 cm x 2.9 cm	Four days of pHA instillation therapy, then switched to standard NPWT. Wound with increased red granulation tissue.
14	68 yr, male	Left foot vascular and surgical wound	11/16/22	Left medial foot wound measures 1.2 cm x 2.0 cm x 1.4 cm. Left lateral foot wound measures 4.7 cm x 4.0 cm x 1.5 cm	Left medial foot wound measures 1.6 cm x 3.4 cm x 1.2 cm Left lateral foot wound measures 3.2 cm x 8.1 cm x 1.3 cm	21 days of pHA instillation therapy, including additional debridements. Successful removal of slough tissue and increased red granulation tissue.
15	82 yr, female	Coccyx, pressure injury	11/18/22	5.2 cm x 3.6 cm x 1.9 cm	4.2 cm x 4.2 cm x 1.8 cm	11 days of pHA instillation therapy. Wound with decreased slough tissue and improved red tissue.
16	73 yr, male	Right foot, surgical wound	11/25/22	6.4 cm x 11 cm x 2.2 cm.	9.2 cm x 8.0 cm x 0.5 cm.	39 days of pHA instillation therapy. Large foot wound with high risk for complete foot loss. Switched to standard NPWT. Followed by 8 days of pHA instillation therapy, then switched to standard NPWT. Wound with increased red granulation tissue and decreased periwound erythema
17	49 yr, male	left foot, surgical wound	11/29/22	3.6 cm x 7.1 cm x 1.4 cm	4.8 cm x 4.2 cm x 0.6 cm	One week of pHA instillation therapy. Switched to standard NPWT at time of discharge.
18	67 yr, female	Abdomen, infected surgical wound	12/1/22	4.1 cm x 1.0 cm x 4.4 cm	3.0 cm x 0.8 cm x 2.2 cm	One month of pHA instillation therapy. Switched to standard NPWT at time of discharge. Wound with improved tissue quality and filled in.
19	67 yr, male	Right leg, neuropathic wound	12/2/23	3.3 cm x 3.2 cm x 1.0 cm	3.8 cm x 4.4 cm x 0.5 cm	27 days of pHA instillation, patient then went comfort care and is now deceased.
20	84 yr, female	Abdomen, surgical wound	12/7/22	2.4 cm x 2.8 cm x 2 cm	3.7 cm x 4.1 cm x 2.0 cm	

CASES

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1	64 yr, male	Sacrum, pressure injury	6/10/22	11.0 cm X 11.1 cm X 3.9	8.5 cm X 10.2 cm X 2.2	One week of pHA instillation, then switched to standard NPWT. Patient wound fully healed as of September 2023





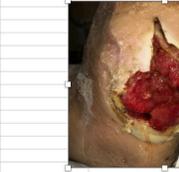
CASES CONT'D

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5	83 yr, female	right lower leg, traumatic wound	9/2/22	9.5 cm x 8.5 cm x 1.2	9.1 cm x 8.0 cm x 0.3	Four days of pHA instillation, patient then went for a skin graft with successful





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13	38 yr, male	Right foot, surgical wound	11/14/22	8.2 cm x 4.7 cm x 4.2 cm	8.1 cm x 5.6 cm x 2.9 cm	Four days of pHA instillation therapy, then switched to standard NPWT. Wound with increased red granulation tissue.


ADDITIONAL CANISTER PICTURES



REFERENCES

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