

Treating Chronic Pyoderma Gangrenosum With Vaporox: A Case Report

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The Next Generation of Advanced Wound Care

> Introduction:

Pyoderma gangrenosum (PG) is a rare, chronic inflammatory skin condition characterized by painful, non-healing ulcers. Standard management often includes systemic immunosuppressants and topical therapies; however, many cases remain refractory to treatment. This study highlights the successful resolution of chronic PG in a 62-year-old female using Vaporox (Vaporox Inc., Denver, CO), as an adjunct to standard care.

> Methods:

The patient presented with a five-year history of intermittent, non-healing ulcers on the ankle, initially diagnosed as PG. Despite long-term management with systemic immunosuppressants (CellCept) and daily topical tacrolimus, which had been the most beneficial treatment thus far, the ulcer persisted. Exacerbation was noted following sharp debridement early in her treatment course, though the wound later tolerated very light debridement during weekly to biweekly visits. Management also included topical antibiotics, a variety of dressings, and skin substitutes at various points, with limited success. A biopsy on May 19, 2023, ruled out malignancy. Vaporox, a novel treatment combining ultrasonic vapor and hyperbaric oxygen, was introduced alongside existing therapies. The patient underwent six Vaporox sessions over four weeks.

> Discussion and Conclusion:

This case illustrates the potential of Vaporox to resolve chronic wounds refractory to standard care. By enhancing cellular repair and tissue regeneration, Vaporox effectively complemented the immunomodulatory effects of existing therapies, leading to complete healing in this patient. Its analgesic effects and ability to facilitate the development of durable epithelial tissue further highlights its utility in managing chronic wounds.

Background

Patient Information

- Age: 62
- Female
- Chronic PG Ulcers

Previous Treatments Tried

- Topical Antibiotics
- Multiple Dressings
- Skin Substitutes
- Systemic Immunosuppressants

A photograph of a patient's ankle showing a large, open, and deep ulcer. The ulcer is surrounded by red, inflamed skin. A white dressing is partially visible on the right side of the ulcer.

> 5-year-old Chronic PG Ulcer, Healed in 6 Vaporox Treatments

Intake

A photograph of the patient's ankle at the start of treatment, showing a large, open ulcer with a ruler for scale.

1 treatment

A photograph of the ulcer after the first Vaporox treatment. The ulcer appears slightly smaller and less inflamed.

4 treatments

A photograph of the ulcer after four Vaporox treatments. The ulcer is significantly smaller and the surrounding skin is less red.

6 treatments

A photograph of the ankle after six Vaporox treatments. The ulcer has completely healed, leaving a smooth, pinkish scar.

Treatments →

1

4

6

% Healed

0

20

40

60

80

100

Area

Volume

A line graph showing the percentage of wound area and volume healed over six treatments. The x-axis represents treatments (1, 4, 6) and the y-axis represents % Healed (0 to 100). Two lines are plotted: an orange line for 'Area' and a blue line for 'Volume'. Both lines show a sharp increase in healing starting at treatment 1, reaching nearly 100% by treatment 6.

Notable Outcome

- Significant Analgesic Effects During and After Vaporox
- Higher Quality Epithelial Tissue
- No Wound Reoccurrence

> Results:

- Initial wound size (Day 0): 0.2 x 0.2 x 0.1 cm
- No change by Day 3; dressing remained intact
- By Day 5: wound reduced to 0.1 x 0.1 x 0.1 cm — significant size reduction
- After six Vaporox sessions: full epithelialization and complete wound closure achieved
- Wound closure was confirmed at 3-month follow-up, with no signs of recurrence
- No adverse events reported during the course of treatment

Patient reported:

- Noticeable pain reduction
- Formation of stronger, higher-quality epithelial tissue

“After introducing Vaporox alongside standard treatments, I observed complete wound closure in just six sessions.”

-Dr. Varughese, MD, CWSP

“A chronic issue I dealt with for 5 years is finally behind me, thanks to the results I experienced with Vaporox.”

-Patient