

## BACKGROUND

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis characterized by painful ulceration with violaceous borders and peripheral erythema. PG is a rare condition affecting only 1 in 100,000 people in the United States, predominantly affecting individuals between the ages of 20 and 50. Diagnosis of PG can be challenging due to the lack of a specific confirmatory test. It typically presents as a painful, rapidly progressing skin lesion, often following minor trauma or surgical procedures. The pathophysiology of PG remains unclear, but it is believed to involve dysregulated immune responses and aberrant neutrophil activation. However, it is frequently associated with other systemic diseases, with approximately 70% of individuals presenting with comorbidities such as blood disorders, inflammatory bowel diseases, and arthritis<sup>2</sup>. This is a case report observing the use of sodium hypochlorite gel and collagenase on pyoderma gangrenosum.

## CASE DESCRIPTION

74-year old female with a past medical history of venous insufficiency and otherwise no other medical conditions, presents to the wound clinic for an evaluation of a chronic right venous stasis ulcer of the medial ankle. The wound had remained open since April 2021, and the patient had been using an ethylene blue dressing, or Hydrofera Blue, which helped maintain wound stability. The wound exhibited violaceous borders, bioburden, granulation tissue with mild serous drainage, no odor, minimal surrounding erythema, and no induration. The primary treatment approach involved the application of a collagenase\* with the previous ethylene blue dressing. The wound was measured in volume, area, and debridement at each checkup and monitored carefully for any changes.

## RESULTS

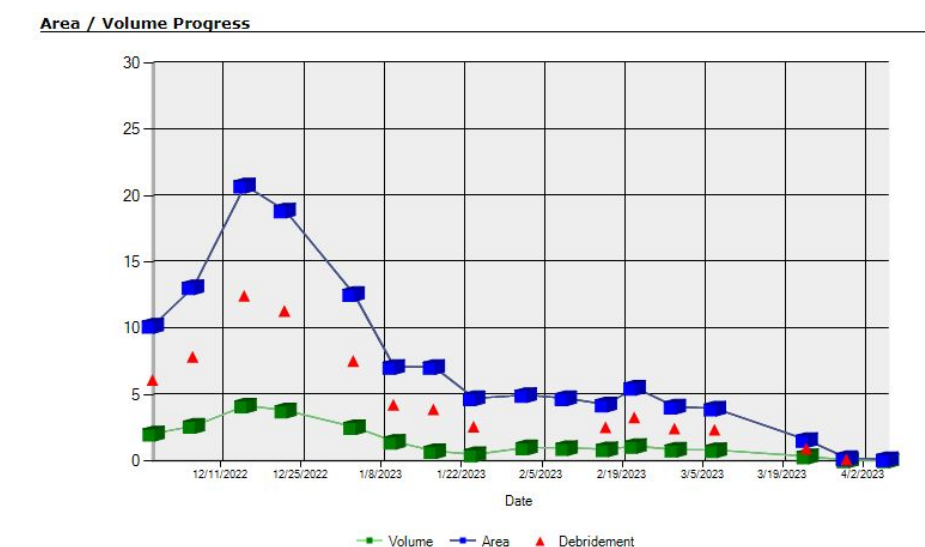
Over the course of nine months, there was a significant reduction in wound volume, area, and need for debridement. The volume went from 2.034 cm<sup>3</sup> to 0.013 cm<sup>3</sup>, the area went from 10.171 cm<sup>2</sup> to 0.126 cm<sup>2</sup>, and the debridement significantly decreased as well in the span of nine months. Ultimately, the wound fully closed and resolved after nine months of continuous application of collagenase in conjunction with the ethylene blue dressing.



## DISCUSSION



Pyoderma gangrenosum can sometimes be difficult to treat, due to the variety of sizes, depths, and growth rates of skin ulcers.<sup>3</sup> As such, there are many different treatments that exist, including a combination of pills, creams, or injections.<sup>1</sup> However, pyoderma gangrenosum often takes several months to heal. The case report at hand demonstrates how pyoderma gangrenosum can be effectively treated and prevented in the span of just 5 months. With the continuous careful debridement and application of Santyl in conjunction with Hydrofera Blue, this case report showcases just one of the many effective treatments for pyoderma gangrenosum and one that should be considered to use for future cases.



## References

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1 Teaching Faculty Valley Hospital Medical Center; Adjunct Professor Touro University Nevada; Regional Director Professional Wound Specialists, Las Vegas. NV  
 2 Touro College of Osteopathic Medicine, OMS4  
 3 Valley Hospital Family Medicine Residency Program, PGY1  
 4 Boston College University