

Background

Pyoderma gangrenosum (PG) is a rare, non-infectious neutrophilic dermatosis that typically presents as painful, destructive, cutaneous ulcerations often appearing on the lower extremities.

PG onset may occur at any age, but commonly affects individuals between ages 20 and 50.

The hallmark of the disease is painful ulcerations exacerbated by minor trauma leading to exaggerated skin injury (pathergy). Surgical debridement is generally contraindicated in pyoderma gangrenosum.

Case Study

We present a case study involving a 60-year-old white female with a history of endometrial cancer, obesity, and VTE on Eliquis (apixaban), with chronic wounds (>30 days) from suspected PG.

She originally presented to the ED in August 2021 with malodorous draining bilateral thigh wounds. At the time, she was evaluated by ID, Dermatology and Surgery.

Surgical debridement was not performed due to pathergy.

The subject was subsequently started on IV Vancomycin, Zosyn and provided local wound care only.

A punch biopsy was performed, confirming the diagnosis of PG. She was discharged to a skilled nursing facility on oral Levaquin 750 mg daily for 6 more days.

Methods

The facility wound care team deemed the patient would benefit most from non-contact, non-thermal, low frequency ultrasound energy to address the significant necrotic tissue to the left medial thigh wound.

This modality acts by selective emulsification and fibrinolysis of necrotic tissue, by upregulation of intracellular activity with enhanced growth factor synthesis, and by disrupting biofilm in the wound bed. It has the added benefit of rendering bacteria more susceptible to antibiotic treatment.

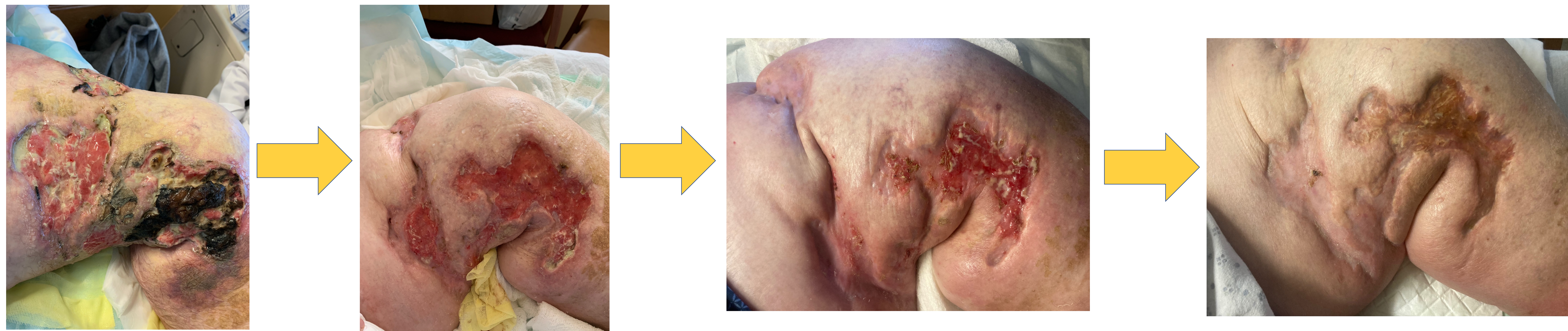
The treatment was performed 3 times weekly, with an average duration of 20 minutes using 360 cc of normal saline.

At each visit, the wound care team assessed the wound response to treatment looking at reduction in necrotic tissue, increase in granulation tissue, decrease in pain, and decrease in size.

Discussion

Based on the outcomes of this case study, we suggest a clear healing benefit using non-contact low frequency ultrasound energy in PG wounds, with the added benefit of being atraumatic and largely pain-free.

Progression of Case



Results

The wound surface area was dramatically reduced by a factor of 5.3 over a 6-month period of ultrasound treatment coupled with significant reduction in necrotic tissue and pain.

The wound bed displayed prominent increase in granulation tissue.

During the treatment period, there were no readmissions to the hospital and no re-infections of the wound.

Contact

Michael E. Jensen
Mjensen@kanewoundcare.com
(609) 945- 7373