

### **Case Study: Chronic Lower Extremity Venous Stasis Ulcer**

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This case is another excellent illustration of the importance of consistent communication, patient compliance, and appropriate debridement in limb salvage. It further reminds physicians of the complexity and multiple factors involved in healing chronic wounds.

The patient is a 55 year old female who presented to WALKS Wound Centers for a left lower extremity venous stasis ulcer. Eight months prior to her initial WALKS visit the patient was hospitalized because of the venous stasis ulcer and cellulitis. Upon discharge the patient did not seek follow up treatment for her lower extremity ulcer. The patient reported changing her dressing at home without any signs of improvement. The patient's reported past medical history details a CVA and seizure disorder.

At the initial visit in October 2015 the ulcer was noted to be necrotic, malodorous, and actively draining a green exudate with obvious clinical signs of infection. The patient rated her pain as 8/10 and the ulcer exhibited an area measurement of 162.5 cm<sup>2</sup> (12.5 cm length x 13 cm width) with a fibrotic base and an absence of bone or tendon exposure. Mechanical debridement was utilized via Arobella ultrasonic device, the ulcer was dressed with Santyl, Vasolex, DSD, ABD and compression was applied via elastic bandages. Labs, which included CBC, ESR, CRP, CMP, wound cultures and an MRI w/o contrast were ordered. Venous/arterial dopplers were ordered to evaluate for venous reflux in both lower extremities. The patient was advised to visit WALKS Wound Centers on Tuesday, Thursday and Saturday of each week for treatment and given prescriptions for Clindamycin 300mg BID 1st day q1 9 days and Ciprofloxacin 500 mg TID 10 days. Culture reports included *Bacteroides Fragilis*, *Peptostreptococcus Anaerobius*, and *Proteus Mirabilis*; the patient was advised to continue with both prescribed medications due to their efficacy, per the lab report, in eliminating the identified bacteria.

During the 2 week period following the initial visit the patient was unable to sustain the advised weekly treatment schedule due to transportation issues. She was unable to obtain the requested laboratory/imaging studies and prescribed medications. At the next visit the Arobella ultrasonic debridement was repeated, the ulcer was dressed with Iodosorb, Vasolex, DSD, ABD pad, Kerlix and compression was applied via elastic bandages, because of increased drainage, Iodosorb was substituted for Santyl. Patient was advised regarding the importance of keeping her follow up appointments, taking prescribed antibiotics, and obtaining labs/studies to promote healing and prevent infection and possible amputation.

A close communication was sustained with her primary care physician, which helped obtain approval for the previously ordered labs/studies, and the patient was offered transportation via hospital van to alleviate her transportation issues. Study results were negative for Osteomyelitis, reflux and venous insufficiency once they were performed in early November 2015. Continued treatment consisting of appropriate debridement, dressing changes and compression via elastic bandages led to the following positive healing timeline:

- Mid November 2015:
  - Pain measured 0/10 decreased from 8/10
  - The ulcer area measured 85.5 cm<sup>2</sup> (9.0 cm length x 9.5 cm width), a 50% reduction
- Early January 2016:
  - The ulcer measured 10.4 cm<sup>2</sup> (4.0 cm length x 2.6 cm width) with a healthy granular base and mild drainage.
- Mid-January 2016:
  - The ulcer measured 5.04 cm<sup>2</sup> (2.8 cm length x 1.8 cm width), a 96% reduction in area, with a fully granular base. Due to the significantly decreased ulcer area the patient was switched to Biopad, a collagen dressing, to help the ulcer close.
- February 2016:
  - The ulcer measured 1.35 cm<sup>2</sup> (1.5 cm length x 0.9 cm width), triple antibiotic ointment was applied.

The patient's wound was completely healed at her 2/25/2016 appointment after approximately 5 months of treatment. The patient was requested to follow up in 1 month.





**10/6/2015 - Initial Visit**



**10/20/2015 - 2<sup>nd</sup> Visit**



**11/12/2015 - 50% Wound Area Reduction**



**12/5/2015 - 75% Wound Area Reduction**



**1/12/2016 - 96% Wound Area Reduction,  
Biopad Applied**



**2/9/2016 - 99% Wound Area Reduction,  
Triple ABX applied**



**2/25/2016 - Wound Healed**

