Successful Treatment of Systemic Sclerosis Caused Ulceration Utilizing Ovine Forestomach Matrix* and Particulate+

Rosemary P. Joseph, DPM, Anthony J. LaLama, DPM

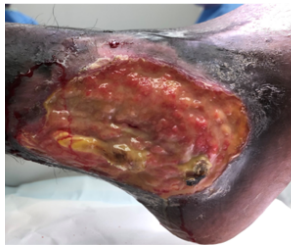
Ascension Providence Hospital – Southfield, MI, USA

REFERENCES & ACKNOWLEDGEMENTS

*Myriad Matrix – AROA Biosurgery, LTD, Auckland, NZ

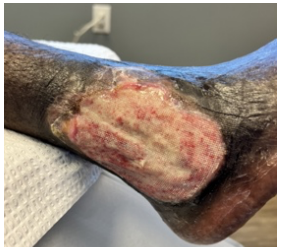
+Myriad Morcells—AROA Biosurgery, LTD, Auckland, NZ

Dr. Anthony J. LaLama is a consultant for AROA Biosurgery LTD



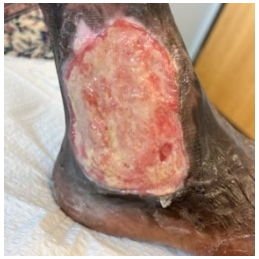
WEEK 0

Figure 1 – Initial Presentation



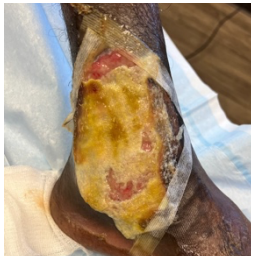
WEEK 5

Figure 2 – Budding of viable granulation tissue, improved wound depth



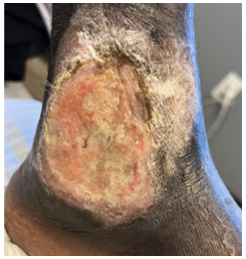
WEEK 10

Figure 3 – Improved pain, increased granulation tissue, no complications



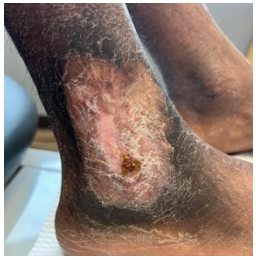
WEEK 16

Figure 4 – Minimal pain, residual graft noted, no complications



WEEK 24

Figure 5 – Less narcotics needed, improved wound bed



WEEK 61

Figure 6 – Healed Ulceration

INTRODUCTION

Systemic Sclerosis (SSc) is a rare autoimmune disease that results in pathologies pertaining to the skin, vasculature, internal organs, and digestive tract. With only 4-12% of SSc patients displaying cutaneous manifestations, there are limited amounts of published research on this topic. Diagnosis of this disease is based on physical exam findings, vascular dysfunction, cutaneous and visceral organ dysfunction, blood tests, and imaging of the heart or lungs. Common cutaneous manifestations of SSc include lower extremity wounds, digital ulcerations, skin thickening, and Raynaud's phenomenon. There are currently no standard treatments for SSc ulcerations, which makes management of this disease a difficult venture.

METHODS

A 24-year-old African American female with past medical history of SSc, rheumatoid arthritis, and Sjogren's disease presented with a one-year-old deep full thickness ulceration to the right lateral ankle with a mixed fibogranular base and exposed peroneal tendon measuring 9.0 x 5.5 x 0.2 cm. She sought care with multiple providers with multiple failed treatments such as amniotic grafting. The patient underwent three procedures that consisted of sharp debridement and application of ovine forestomach matrix* and particulate+ at weeks 0, 8, and 14. The wound was assessed weekly and redressed with a contact layer and dry sterile gauze.

RESULTS

By week 5, complete coverage of the peroneal tendon was noted. By week 24, the patient endorsed improvement of pain requiring less narcotics for pain control. The ulceration decreased in width, length, and depth. A granular wound bed was noted with tendons and deep structures no longer exposed. By the end of the treatment, the wound base was completely epithelialized.

DISCUSSION

The etiology of SSc ulcerations is unknown and likely multifactorial as these wounds suggest chronic vasculopathy. Wound biopsies, antiphospholipid antibody markers, and genetic prothrombotic screens should be obtained. Wound care, including debridement of nonviable tissue and regular dressing changes, are tantamount. Providers should supplement wound care with venous and arterial testing, anticoagulants, and vascular intervention. Along with these modalities, application of readily accessible products, such as ovine forestomach matrices* and particulates+, allow for healing of these chronic and complicated wounds with less pain medications, surgical procedures, and health care costs.