

Early Experience with a Composite Ovine Forestomach Matrix Graft in Chronic Lower Extremity Wounds: A Multi-Center Retrospective Case Series

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INTRODUCTION

A composite ovine forestomach matrix bioscaffold incorporating hyaluronic acid (OFM-HA) has been recently developed for the outpatient management of complex wounds.¹ OFM and hyaluronic acid (HA) synergistically promote keratinocyte proliferation and migration to help drive wound closure, while HA maintains a balanced moisture environment.^{1, 2} Previous reports show successful treatment of chronic diabetic foot ulcers (DFUs) and calciphylaxis with OFM-HA.^{3,4} To expand on earlier findings, we retrospectively analyzed outcomes from three outpatient wound care centers using OFM-HA to treat chronic wounds.

METHODS

Retrospective data were collected from ten consecutive patients with lower extremity chronic wounds treated with OFM-HA (Symphony™, Aroa Biosurgery Limited, Auckland, NZ) at three outpatient facilities between June 2022 and June 2025 after receiving standard of care (SOC). SOC included debridement, offloading, and secondary dressings. The wounds were considered chronic if persistent for ≥4 weeks. OFM-HA was applied after rehydration in sterile saline with adhesive strips or staples, followed by non-adherent dressing, gauze and/or foam dressing, and appropriate compression and/or offloading. Wounds were evaluated weekly, with cleansing, debridement and re-application of OFM-HA completed as needed. Demographic information, baseline wound characteristics, wound area, and time to closure were recorded. Closure was defined as 100% re-epithelialization without drainage. Percent area reduction (PAR%) was calculated relative to the initial wound area.

RESULTS

All wounds were chronic lower extremity ulcers treated with OFM-HA. The mean patient age was 67.7±10.7 years and 70% were male. The median wound age was 4.5 (IQR: 4, 7.25) weeks with a median area of 6.8 (IQR: 3.8, 15.6) cm². Most wounds were DFUs (70%), followed by a pressure injury, an atypical vasculitic ulcer, and a necrotizing soft tissue infection resulting from a DFU. Wound locations included the forefoot (70%), the heel (20%) and ankle (10%). Comorbidities included diabetes (90%), peripheral artery disease (80%) and hypertension (80%). Most patients had complicating factors, including prior amputations (40%). Three (30%) individuals had exposed bone.

Statistic	Week Achieved 50% PAR	Time to Closure (weeks)	Number of Applications	OFM-HA Application Rate (applications/week)	Time to Last Follow-Up (weeks)	Complications
Median (IQR)	3.0 (1.0, 4.3)	9.0 (5.5, 15.5)	4 (2, 5)	0.3 (0.3, 0.6)	32 (11.0, 59.8)	None
Min, Max	1.0, 8.0	3.0, 17.0	1, 5	0.1, 1.0	4.0, 82.0	None

REFERENCES AND DISCLOSURES

1. Smith M. J. et al. (2021) “Further structural characterization of ovine forestomach matrix and multi-layered extracellular matrix composites for soft tissue repair.” J Biomater Appl. 2. Schanté C. E. et al. (2011) “Chemical modifications of hyaluronic acid for the synthesis of derivatives for a broad range of biomedical applications.” Carbohydrate Polymers. 3. Le L. et al. (2025) “A Composite Dermal Matrix Comprising Ovine Forestomach Matrix and Hyaluronic Acid in the Treatment of Chronic Wounds Secondary to Calciphylaxis: A Case Series and Literature Review.” Adv Skin Wound Care. 4. Tettelbach W. et al. (2025) “Innovative treatment of diabetic ulcers: combining chemical debridement and xenograft applications: a case study.” J Wound Care. No direct funding was provided. Authors are consultants for Aroa Biosurgery Limited.

CONCLUSION

OFM-HA was effective and safe to treat complex lower extremity chronic wounds in the outpatient setting in a challenging patient group. Additionally, OFM-HA proved to be a durable material, with full closure requiring few applications. In two cases, OFM-HA was used successfully both succeeding and preceding other OFM treatments. These preliminary findings from a multicenter analysis add real-world validation to outcomes from more tightly controlled RCT studies with OFM-HA.

CASE EXAMPLE: Wagner 2 DFU of the left plantar heel of a 56-year-old female with uncontrolled diabetes, Charcot arthropathy, and hypertension.

