Traumatic Lower Extremity Wound from Motor Vehicle Accident Treated with Dehydrated Human Umbilical Cord and Dehydrated Human Amnion/Chorion Membrane

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SAWC Fall 2023

OBJECTIVE

Serial debridement in combination with advanced wound therapies, such as placental allografts, have demonstrated beneficial outcomes compared SOC in complex wounds.[1] Dehydrated human umbilical cord (DHUC)* and dehydrated human amnion/chorion membrane (DHACM)† have been used to aid in wound closure, including diabetic foot ulcers, partial and full thickness burns, donor sites, and surgically debrided areas.[2,3]

METHODS

This is a case report of a 65-year-old obese male that presented with a non-healing, traumatic wound on the left lower extremity from a motor vehicle accident (MVA) 4 weeks prior. Previous medical history includes poorly controlled diabetes (HgA1c = 9.7) and cardiomyopathy. He reportedly does not smoke and rarely consumes alcohol. Patient reports malodorous purulent drainage daily with intermittent shooting pain. He received a surgical debridement with wound VAC placement and then transferred to the outpatient wound center for long-term wound care.

RESULTS

Following OR debridement, the wound measured 15 cm x 6 cm x 0.2 cm. Patient presented to the wound center approximately 2 weeks later to begin weekly wound care. Serial debridement and VAC application were performed at the first two visits and DHUC was applied upon the third visit coinciding with the discontinuation of VAC. This was approximately 8 weeks after the MVA with the wound measuring 9.0 cm x 5.0 cm x 0.6 cm. Upon the fourth visit, patient began receiving DHACM Mesh and continued to receive DHACM for the next nine visits. In total, patient received one application of DHUC and ten applications of DHACM over the course of 14 weeks and the wound gradually progress to closure. Wound closure was achieved 24 weeks post-MVA.

*DHUC = EPICORD (Mimedx Group, Inc, Marietta, GA)

†DHACM = EPIFIX (Mimedx Group, Inc, Marietta, GA)

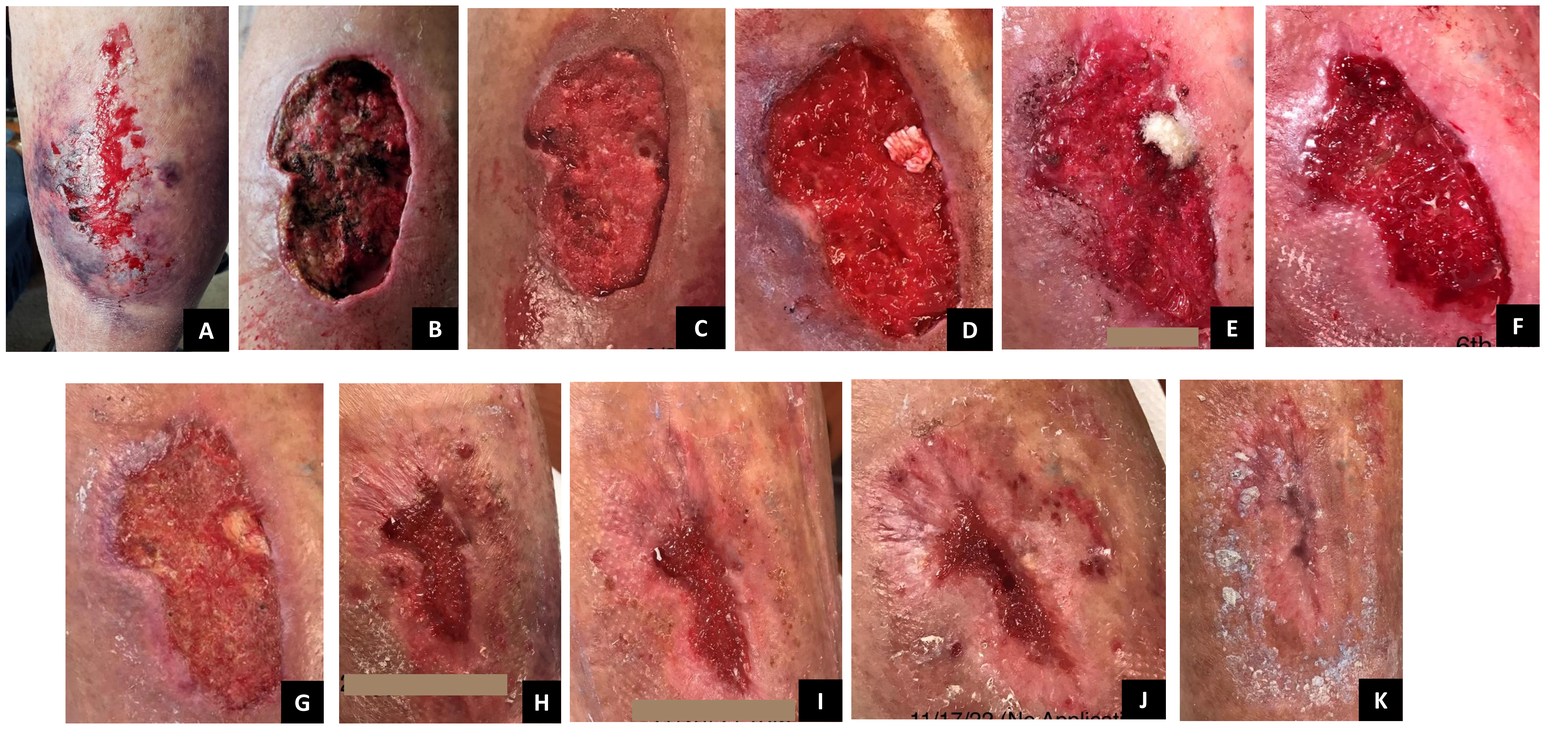

Figure 1: Initial presentation & post-debridement (A, B) with wound measuring 15 x 6 x 0.2cm, after debridement #2 + VAC (C), 1st DHUC application & discontinuation of VAC (D) with total wound area measuring 9.0 x 5.0 x 0.6cm , 1st DHACM application (E), continued weekly applications of DHACM with consistent wound area reduction (F, G, H, I, J), until complete closure (K). A total of 10 applications of placental-based allografts (1 DHUC & 9 DHACM applications) were applied.

CONCLUSION

This case demonstrated how placental allografts can be used to provide a protective barrier to help support the healing cascade in a large, non-healing, traumatic wound in combination with quality wound care. The long-term goal of closure via secondary intention was achieved by incorporating placental allografts into the wound care treatment plan after failure to observe adequate progress with conservative methods.

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Disclosures: Poster development supported by MIMEDX Group, Inc.

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