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SUCCESSFUL TREATMENT OF A LARGE SCALE, FULL THICKNESS REFRACTORY BURN WITH VIABLE CRYOPRESERVED PLACENTAL MEMBRANE AFTER FAILED SKIN GRAFT

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Desert Foot, November 29-Dec 2, 2017, Phoenix, AZ



PURPOSE

Many wound care modalities are used in the treatment of chronic and complex in efforts to prevent major limb complications in the diabetic population. Ulcers lead to disability, morbidity, and accelerated mortality. Viable cryopreserved placental membrane (vCPM*) application is frequently used in conjunction with advanced and standard wound care regimens, as well as after STSG failure. This case presents a failed STSG in a complex large scale refractory lower extremity burn which was treated successfully with vCPM.

Amniotic membrane is derived from the placenta and is rich in cytokines and growth factors known to promote wound healing and scar tissue. Cryopreserved placental membrane is comprised of an extracellular matrix (ECM) rich in collagen, growth factors, fibroblasts, mesenchymal stem cells (MSCs), and epithelial cells native to human tissue.

METHODS

47 year-old male patient with five week history of third degree thermal burns of his left leg, ankle and foot. He is status post split-thickness skin graft (STSG) x 5 weeks at a burn unit upon presentation to our VA clinic. No local wound care had been initiated following discharge from the burn unit. A large circumferential area measuring 391 cm² involving of the left leg, ankle and dorsal left foot with fibrosis, sloughing and dried necrotic (STSG) skin graft previously applied.

METHODS CONT.

Last a1C 11.8, blood sugar 240. PMH: Uncontrolled Type 2 DM, diabetic peripheral neuropathy, diabetic foot ulcers, and chronic osteomyelitis with previous right foot fifth ray amputation.

Patient was started on aggressive use of advanced wound care modalities; with early ambulation with compression dressing, enzymatic debridement, hydro-surgical debridement, and application of cryopreserved placental membrane graft application that were used until closure was obtained.

RESULTS/CONCLUSION

Complicated burns in patients with multiple comorbidities is challenging and require advanced wound treatment. Aggressive advanced use of wound care modalities should be used in healing complex wounds such as burns resulting in rapid re-epithelialization and reduction of scar tissue. In this case of a large surface area burn treated with vCPM, the percent wound area reduction with grafting at week 8 was 82%. Total wound area reduction was 99% by 41 weeks. Aggressive advanced wound care modalities in conjunction with the serial application of vCPM showed favorable results in rapid re-epithelialization with reduction of scar tissue, in the scenario of a large failed STSG.

RESULTS

Serial sharp debridement with weekly application of viable cryopreserved placental membrane (vCPM*) until closure was obtained .



Presentation 5 weeks post STSG



Post debridement 7 weeks



14 weeks



10th application 16 weeks



18 weeks



23 weeks



31 weeks



41 weeks



41 weeks

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