Pilot Study Assessing Novel Autologous Homologous Skin Construct Treatment of Venous Stasis Leg Ulcers

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Introduction

Skin tissue regeneration is a significant burden in the worldwide health care system and an area refractory to standard treatments. VLUs are high-risk treatments. 1/2 of all hospitalizations for women and 2/3 of all hospitalizations of men hospital admitted for severe vascular disease are due to VLUs. Many VLUs are refractory to standard treatments and can result in significant morbidity and death. Homologous allogeneic skin constructs have been used for decades with variable success. There is a need for a superior treatment to improve clinical outcomes and decrease patient morbidity.

AHS Clinical Workflow for Clinic Setting

- The full-thickness harvest performed in the clinic is made into a homologous skin construct in the clinic.

Dressing Protocol

- Initially, the dressing is held for 24 hours before being removed to avoid any inflammation issues.

Healing Progression VLUs Treated with Autologous Homologous Skin Construct

Baseline

AHSC Deployment

Interim Healing

Validated

Patient 4

Day 0

12 Days Post-AHSC

42 Days Post-AHSC

11 Days Post-AHSC

34 Days Post-AHSC

Changes in Gene Expression after AHSC Processing

- The genes that are upregulated are shown in red, and the genes that are downregulated are shown in green.

Conclusions

AHSCs may be superior to traditional VLUs and can be used for a variety of applications in wound care.

Disclosures

The authors report no financial or other conflicts of interest.

References


Figure 1: 4. Representative imaging of the wound repair. AHSCH-harvest and healing progression of four patients with chronic, refractory ulcers, before and after healing.

Figure 2: Changes in Gene Expression after AHSC Processing.