

Regenerative Epidermal Suspension as an Adjunct to STSG in Closing Massive Lower Extremity Wounds

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BACKGROUND

Skin grafting massive (>100 sq cm) lower extremity wounds requires very large donor sites and in an attempt to decrease the donor site morbidity and increase the percentage to graft “take” we explored an autologous spray-on skin system.



Rheumatologic



Hematologic

METHODS



5 limbs in 3 patients were treated. All wounds were pulse irrigated and STSG 1:3 was applied.

The RECELL® Autologous Cell Harvesting system (ACHS) was used to provide a point of care autologous Regenerative Epidermal Suspension (RES) applied directly to the donor site and the wound bed followed by Telfa® clear, multilayer compression & 4 days immobilization.



RESULTS

The five wounds had a mean area of 178 sq cm (84 sq cm, 420 sq cm, 120sq cm, 120 sq cm, 144 sq cm). Two of the wounds were rheumatologic, two were hematologic, one wound was secondary to venous incompetence. Three of the five wounds had > 95% take at 7 days and 100% closure at 28 days. Two wounds in one patient (with hematologic origin) had less than 50% closure at 7 and 28 days. All donor sites were healed by 21 days.



Day 15



Day 20

CONCLUSIONS

RES filled in the interstices of the meshed STSG & appeared to aid in healing. In addition, the area needed to harvest was reduced by 25%. The one patient failure is likely attributable to suboptimal wound bed prep & patient immobilization. A controlled prospective trial needs to be carried out that will be dependent upon adequate wound bed preparation.



Day 135



Day 44

