Use of fibrin glue for split thickness skin graft fixation allows early mobilization without graft loss.

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Abstract:

Introduction: Ambulation and mobilization of burned extremities early in the burn survivor's course is a key factor in preventing long term disability and avoiding the complications of prolonged bed rest. Though this is well established, concern for autograft loss due to shear forces or extremity edema have sometimes delayed the practice of early physical and occupational therapy after surgery. The development of fibrin glue products has allowed for improved autograft adherence. Using this product exclusively may help facilitate early mobilization without the adverse consequence of graft loss. Methods: A one year retrospective electronic medical record review of a single surgeon cohort of patients requiring extremity autografts was conducted. Patients had either lower extremity (29 cases) or upper extremity (34 cases) autografts affixed with fibrin glue only and were mobilized on post operative day zero or one. After applying exclusion criteria (critical illness, mobility restriction, multiple grafting procedures performed by several surgeons, lost to follow up), 15 lower extremity and 17 upper extremity cases were included. Graft location, size (cm2), graft take one month post-op, and patient co-morbidities were collected for analysis. Results: Lower extremity graft sites ranged from 12 to 800 cm2, average graft take was 92.3% with a standard deviation of 12.6; upper extremity graft sites ranged from 10 to 800 cm2, average graft take was 95.2% with a standard deviation of 8.0. For both groups combined average take was 93.8%. Of the four patients with partial failure (50-90% take), three had diabetes and one had a deep burn and morbid obesity. Conclusions: Extremity autografts adhered with fibrin glue and mobilized on post-operative day zero or one demonstrated an average of 93.8 % graft take. The majority of patients had greater than 90%

graft take that did not require additional surgery. This indicates that early mobilization is possible with the use of fibrin glue with no significant graft loss.