Early Ambulation Initiative Following LE Grafts in Comparison to Our Center's Traditional Standard of Care: A Retrospective Data Review

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Introduction

Our traditional practice guideline following lower extremity grafting is loosely defined as post-operative bedrest vs. lateral transfers only until POD#5. Patient's mobility status is increased POD#5 with WB established per physician discretion. A proposal was created to initiate mobility earlier than POD#5 for patients with LE grafts. Two of our three surgeons were in agreement with the early ambulation protocol. The third surgeon wished to follow the traditional ambulation practice guideline. This request was respected and made known to all staff for carryover. This afforded us the opportunity of a comparison group with our center's traditional standard of care functioning as the control group.

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Methods/Design

The proposed early ambulation protocol was influenced by previously researched guidelines found in Practice Guidelines for Early Ambulation. by Nedelec et.al in combination with the input of our burn surgeons. Criteria was based upon the location of grafting, graft crossing a joint, size of wound being grafted (< or = 400 cm), and general medical status of the patient. Our early ambulation protocol was established as follows:

POD#1	Lateral transfers with involved LE elevated
POD#2	WBAT, Dependent LE at edge of bed, WBAT short distance ambulation to chair or bathroom with AD.
POD#3-4	Increase ambulation as tolerated, assess need for continued splinting, assess appropriateness of progressive ambulation, assess need for assistive device, AROM exercises
POD#4-5	Progress ambulation with AD as needed, stairs as needed for discharge, home exercise program

Inclusion Criteria: LE burns with STSG not involving joints, STSG involving joints with appropriate immobilization

Exclusion Criteria: fractures of involved LE, patients who were non-ambulatory at baseline, wounds >400 cm2, STSG to plantar aspect of foot, medically unstable patients, and surgeon discretion.

Results/Findings

Data reviewed over an eight month period of time yielded 27 patients who met our established criteria; 26 had no graft loss on the first dressing change. The graft loss was attributed to placement directly over bone of the distal phalnx. Comparatively, no loss was noted in the control group with 10/10 patients ambulating on POD#5. Of note, early ambulation was granted for several patients with larger surface areas with no graft loss demonstrated, but were not included in this study.

Conclusions/Implications

In conclusion, 96% of 27 patients demonstrated no graft loss with first dressing change following our early ambulation guideline. All 10 patients who followed the traditional ambulation guideline demonstrated no graft loss on the first dressing change. Based on our findings, early mobility is not detrimental to graft integrity following specific established guidelines.

Our data supports early mobility of LE grafting up to 400 cm2 with 96% success rate. This may be supportive of further research with early mobility involving a larger surface area of LE STSG.