



NEW YORK REGIONAL SOCIETY OF PLASTIC SURGEONS

2018 RESIDENTS' NIGHT ABSTRACT

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Title: *Treatment and Salvage of Exposed Vascular Grafts by Local Muscle Flap Coverage*

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PURPOSE: Vascular grafts, although often employed in the management of peripheral vascular disease with significant success, can be a source of infection as they are foreign to the body. Infected or exposed vascular grafts are often treated aggressively to prevent morbidity and mortality. Traditional treatment involves antibiotic therapy, extensive debridement and ultimately, excision of the graft; occasionally, others may manage with long term negative pressure vacuum therapy. Recently, muscle flap treatment has been assimilated into the treatment paradigm with varying rates of success. This review presents the experience of a single surgeon in managing infected and exposed vascular grafts with local muscle flaps.

METHODS: retrospective review of a single surgeon's experience in the treatment of vascular graft infections with local muscle flaps was performed over an 8 year study period. Demographic information such as age, sex, assigned ASA categories, and medical co-morbidities were described for the study group. Procedural information, such as the level of bypass performed and the type of synthetic grafts employed were detailed. The particular flaps performed in the treatment of the infection or exposure were also detailed. The primary outcomes of 30-day mortality and 30-day complication rates as well as secondary outcomes of graft patency and survival at 1 year were assessed.

RESULTS: A total of 33 patients underwent primary vascular interventions by means of femoral-popliteal bypass, femoral-femoral bypass, femoral-tibial bypass, ileo-femoral bypass, bilateral iliac aneurysm repair, ileo-popliteal bypass, aorto-bifemoral bypass, popliteal-peroneal bypass, axillary-bifemoral bypass, aorta reconstruction, or common femoral vein reconstruction. All included patients demonstrated a graft infection or exposure of graft during their postoperative course. All patients underwent local muscle flap closure either by sartorius, gracilis, gastrocnemius, or rectus abdominis donors. The 30-day mortality of all patients was 15.15 percent, and the 30-day complication rate was 18.18 percent. The patency rate of the patients that participated in long term follow-up was 92.86 percent. Survival rate at 1 year was 80.0 percent. No particular infectious organism was associated with worsened outcomes in terms of mortality or complications.

CONCLUSIONS: Within the literature, vascular graft salvage rates between 55 and 90 percent are reported, and the findings of this study further support the use of local muscle flap coverage in the setting of vascular graft infections or exposure. Muscle flaps in the setting of vascular graft infections appear to enhance the likelihood of vascular graft salvage thereby improving limb loss rates and mortality. Definitive management with muscle flap coverage leads to improved outcomes with maintenance of the vascular graft and resultant patency with decreased morbidity and mortality.