INTRODUCTION: The vascularized lymph node transfer (VLNT) is one of the flap of choices for lower extremity lymphedema. Although physical rehabilitation is important for lymphedema treatment, there is no standardized procedure for different stage lymphedema. This study was conducted to investigate the long term outcome using VLNT and complete decongestive therapy (CDT) in lymphedema.

METHODS: An IRB approved prospective study was performed of patients who underwent vascularized lymph node transfer for symptomatic upper (ULL) or lower limb (LLL) lymphedema. Patients who had either submental or groin VLNT for upper or lower limb lymphedema were included. Outcomes were assessed using improvement of circumference reduction, decreased number of episodes of cellulitis and health related quality of life (HRQoL) metric.

RESULTS: A total 138 patients were identified and met the inclusion criteria. Almost equal patients underwent VLN (50.7%) as compared to CDT (49.3%) for lymphedema. Patients' age, BMI, tobacco use, diabetes, hypertension, lymphedema grading and lymphedema reason were similar between groups (p=0.4; p=0.2; p=0.6, p=0.5, p=0.5, p=0.7, p=0.7, respectively). Circumference reduction was statistically higher in the VLNT group (35.3%) as compared to the CDT group (23.4%); and postoperative episodes of cellulitis was statistically lower in VLN group (1.4 ± 1.3 times per years) compared to CDT group (4 ± 1.5 times per years) at a 12-month of follow up (p= 0.03 and p= 0.04, respectively). In HRQoL part, overall quality of life and function, body appearance, symptom, and mood domains were all significantly improved in the VNL group (p< 0.01 within each domain).

CONCLUSION: The vascularized lymph node transfer and complete decongestive therapy and are both valuable treatment options in treating lymphedema with different grading. VLN transferred is much more effective in severe lymphedema (Grade III to IV) in the functional recovery. These functional improvements are mirrored by improvements in patient reported outcomes and quality of life measures. These changes can be seen at a 12- month of follow-up and continued steady improvement can be expected.

Comparing Outcomes Between Vascularized Lymph Node Transfer and Lymphovenous Anastomosis in the Treatment of Primary Lymphedema

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INTRODUCTION: Primary lymphedema is a devastating and debilitating disease. Much of the current treatment options demonstrate evidence in the treatment of secondary lymphedema. This study was to investigate the outcomes between vascularized lymph node transfers (VLNT) and lymphovenous anastomosis (LVA) in the treatment of primary lymphedema.

METHODS: A total of 17 patients with a mean age of 31 (ranged 2- 57) years were recruited to the study with a total of 19 lower limbs with primary lymphedema. All patients reported a non-hereditary, occurrence of lymphedema without surgical and medical history. All patients were treated with either VLNT or LVA. Patients with a grade 1 or early grade 2 lymphedema were treated with LVA whereas late grade 2 to grade 4 patients received VLNT treatment. Quality of life and serial circumferential limb measurements including number of episodes of cellulitis were compared both pre and postoperatively.

RESULTS: Fifteen limbs underwent VLNTs and had an average of 3.8 cm circumferential reduction above knee, 3.6 cm below knee and 4 cm above ankle with an average reduction of 3.7 cm. Four limbs received LVA treatment and had an average of 1.3 cm circumferential reduction AK, 3.0 cm BK and 1.5 cm AA, giving an average reduction of 1.9 cm. Follow-up was for an average of 19.7±8.5 months. Patients in the VLNT group had an average cellulitis episode drop from 5.2 preoperatively to 0.1 postoperatively. Patients in the LVA group reported an average reduction in cellulitic episodes from 5 preoperatively to 0.8 postoperatively. In the LVA group, an average significant improvement in overall quality of life was noted by 2.5 points. In the LVA group, an
average improvement in the overall quality of life score was seen by 2 points.

CONCLUSION: In conclusion, primary lymphedema can be effectively treated adequately with improvements in both functional and quality of life outcomes with appropriate lymphedema microsurgeries. VLNT when used in severe cases of lymphedema, can provide greater relief with more impactful outcomes in both functional restoration and quality of life outcomes.

Establishing the Cost Effectiveness of Vascularized Lymph Node Transfer. Are We There Yet?

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INTRODUCTION: Secondary lymphedema is a chronic and debilitating complication of breast cancer therapy affecting more than one in five breast cancer survivors. In this patient population, patient-reported outcomes may be more important in predicting long-term health-related quality of life (HRQoL) than clinician measured outcomes. Cost-effectiveness analysis can be used to compare different treatment modalities based on HRQoL. The aim of this study was to (1) assess reported HRQoL measures following vascularized lymph node transfer (VLNT) and complex decongestive therapy (CDT) and (2) determine the suitability of current data to design a cost-effectiveness analysis able to inform lymphedema treatment decisions.

METHODS: A literature review was performed to identify studies measuring HRQoL in patients with breast cancer-related lymphedema (BCRL) following either CDT or VLNT. Eleven studies were included, three for VLNT and eight for CDT, all of which used lymphedema-specific measurements. VLNT patients were evaluated with LYMQOL or ULL-27. CDT patients were evaluated with SF-36, FACT-B, EORTC QLQ-C30, EORTC QLQ-BR23, or WCLS. We assessed the ability of current data on HRQoL to meet the requirements of a cost-effectiveness analysis, specifically the availability of generic preference-weights for outcomes of interest.

RESULTS: Significant improvements in HRQoL were reported in all studies for VLNT and all, except for two, studies for CDT. However, HRQoL was reported using a variety of lymphedema-specific instruments which limited the ability for comparison. Cost-effectiveness analysis requires a common metric to compare the value of alternative treatment options. This method is limited by the use of a preference-weights to measure HRQoL, which is less sensitive to the impact of lymphedema-specific complications.

CONCLUSION: In deciding among BCRL treatment modalities, cost-effectiveness analysis is a valuable method providing information on the incremental benefit of each alternative. Current data is not sufficient to compare HRQoL among treatment options nor to conduct an adequate cost-effectiveness analysis. Further study is required to determine HRQoL using preference-based utility measures.

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Carpal Tunnel Syndrome Management in Breast Cancer Survivors at Risk for Lymphedema: A Markov Model

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