Title

Factors Associated With 1-year Amputation-free Survival Following Lower Extremity Revascularization

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Authors

Zarrintan, Sina
Willie-Permor, Daniel
Patel, Rohini J
et al.

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acquired per patient was 0.72 ± 0.63 per week, for a total mean of 5.80 ± 5.30 scans over the course of 8 weeks. Wound app use triggered an early change in wound management for 36.0% of patients. Ninety-four percent of patients and physicians involved in the study reported the app was useful (Fig 2).

Conclusions: The Healthy.io Minuteful for Wound app is a feasible means of remote wound monitoring for use by patients and/or their caregivers. This study is the impetus for a new randomized controlled trial investigating the efficacy of wound healing with remote wound app monitoring vs standard in-person clinic visits for the treatment of lower extremity wounds, in which we hope to show the barriers that often interfere with in-person follow-up visits will no longer interfere with proper wound care.

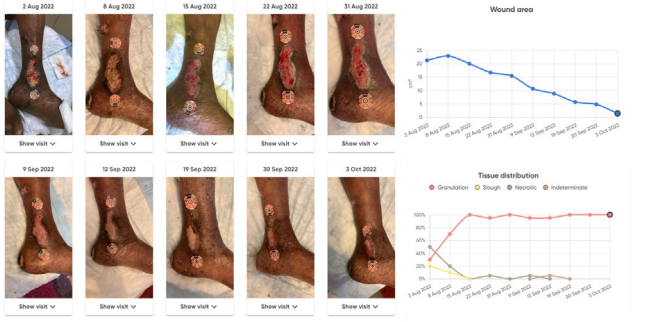

Fig. Example wound snapshots showing wound progression over the 8-week study period along with associated wound are and tissue distribution plots, as provided by the Healthy.io Minuteful for Wound smartphone app.

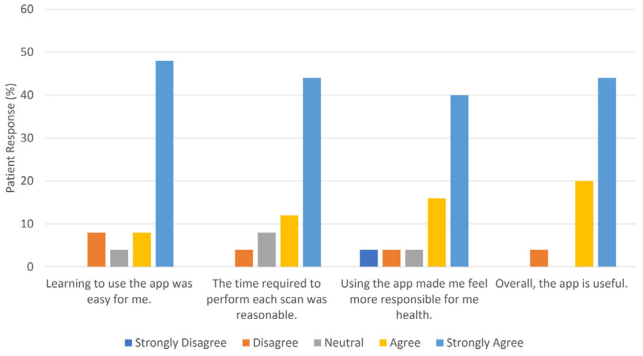

Fig 2. Post-study patient survey results documenting perceived ease of use, patient empowerment, and overall usefulness of the Healthy.io Minuteful for smartphone app.

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INTERACTIVE POSTER SESSION

IP217

Factors Associated With 1-year Amputation-free Survival Following Lower Extremity Revascularization in Patients with Chronic Limb-threatening Ischemia: An Analysis of VQI-VISION Database

Sina Zarrintan, Daniel Willie-Permor, Rohini J. Patel, Tom Alsaigh, Mahmoud Malas. University of California, San Diego, San Diego, CA

Objectives: Patients with chronic limb-threatening ischemia (CLTI) are usually older with multiple comorbidities. Factors associated with outcomes of revascularization are generally discussed with patients for decision making. Amputation-free survival (AFS) is one of the most useful outcomes that help patients and physicians in deciding the best approach of management. In the present study, we aimed to determine factors associated with loss of AFS (major amputation or death) within 1 year of lower extremity revascularization in patients with CLTI using Vascular Quality Initiative-Medicare-Linked database (VISION).

Methods: We queried all patients who underwent lower extremity revascularization for CLTI resulting from arterial occlusive disease in the VISION database from 2003 to 2019. Patients with prior ipsilateral revascularization, or prior ipsilateral major amputation or with concomitant suprainguinal procedures were excluded. The primary outcome was AFS within 1 year of revascularization. Cox regression was used to determine factors associated with 1-year major amputation or death.

Results: A total of 40,851 patients were included in the study (Female, 40.2%). The mean age of patients was 72.8 ± 10.8 years. There were three types of revascularizations: bypass with great saphenous vein graft (BGSVG), (n = 6830; 16.7%), bypass with prosthetic graft (BPG) (n = 3487; 8.5%), and endovascular therapy (ET) (n = 30,534; 74.7%). The overall 1-year AFS was 64.4%. AFS was 73.7%, 69.4%, and 61.6% in the BGSVG, BPG, and ET groups, respectively ($P < .0001$) (Fig 1). Factors associated with 1-year major amputation or death after revascularization were: BPG (adjusted hazard ratio [aHR], 1.19; 95% confidence interval [CI], 1.07-1.32; $P = .001$), ET (aHR, 1.28; 95% CI, 1.18-1.38; $P < .001$), older age, living in nursery facilities, non-ambulatory status, insulin-dependent diabetes mellitus, coronary artery disease, congestive heart failure, chronic kidney disease, preoperative anticoagulant use, prior contralateral procedures, infra-geniculate bypass, tissue loss, and non-elective procedures. On the other hand, obesity and preoperative use of aspirin, statins, and renin-angiotensin-aldosterone system inhibitors were associated with lower hazards of amputation or death within 1 year (Table).

Conclusions: Using multi-institutional data from a Medicare-linked registry, we determined factors associated with 1-year loss of AFS following lower limb revascularization in patients presenting with CLTI. We found that open bypass with great saphenous vein graft had the greatest 1-year AFS followed by bypass with prosthetic graft. Endovascular revascularization has the lowest 1-year AFS. The findings of the present study can help practitioners estimate one-year loss of AFS in patients being evaluated for lower limb revascularization. Furthermore, this study emphasizes the importance of maximizing treatment of patients' comorbidities and perioperative protective medications use to improve the outcomes.

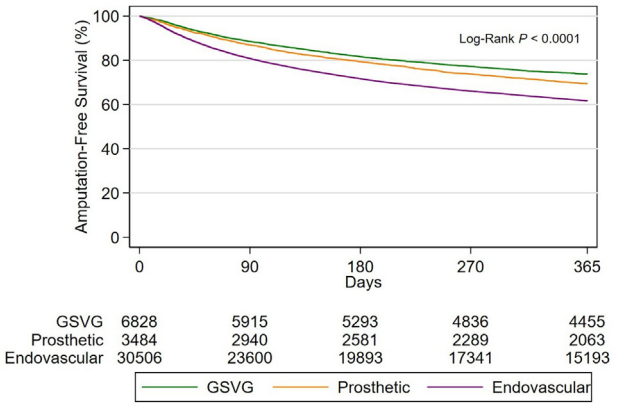

Fig. One-year amputation-free survival following lower extremity revasularization stratified the type of treatment received. GSVS, Great saphenous vein graft.

Table. The COX regression model for 1-year amputation or death (loss of amputation-free survival [AFS]) within 1 year following lower extremity revascularization

Factor	aHR	95% CI	*P*-value
Type of revascularization			
Open bypass with GSVG	Reference	–	–
Open bypass with prosthetic graft	1.19	1.07-1.32	**.001**
Endovascular therapy	1.28	1.18-1.38	**<.001**
Age	1.02	1.02-1-02	**<.001**
Race			
White	Reference	–	–
Black	1.00	0.93-1.07	.933
Other	1.00	0.90-1.11	.900
Ethnicity (Hispanic or Latino)	0.92	0.83-1.01	.076
Obesity			
Non-obese	Reference	–	–
Obese	0.83	0.78-0.88	**<.001**
Morbid obese	0.85	0.75-0.95	**.004**
Living status			
Home	Reference	–	–
Nursery	1.52	1.42-1.64	**<.001**
Homeless	0.67	0.39-1.15	.145
Preoperative non-ambulatory status	1.34	1.25-1.44	**<.001**
Hypertension	0.94	0.87-1.01	.111
Diabetes mellitus			
No diabetes	Reference	–	–
Diabetes on diet	1.10	0.99-1.21	.067
Diabetes on oral medications	1.05	0.97-1.13	.220
Diabetes on insulin	1.24	1.17-1.33	**<.001**
CAD	1.15	1.09-1.20	**<.001**
CHF			
No CHF	Reference	–	–
Asymptomatic CHF	1.31	1.24-1.39	**<.001**
Symptomatic CHF	1.59	1.49-1.69	**<.001**
CKD			
eGFR>60 mL/min	Reference	–	–
Moderate CKD (30≤eGFR<60)	1.16	1.11-1.21	**<.001**
Severe CKD (15≤eGFR<30)	1.66	1.54-1.80	**<.001**
ESRD (eGFR<15)	2.53	2.08-3.07	**<.001**
Preoperative aspirin	0.92	0.88-0.97	**.002**
Preoperative statin	0.86	0.82-0.90	**.001**
Preoperative RAAS inhibitor	0.85	0.82-0.89	**<.001**
Preoperative anticoagulant	1.18	1.11-1.25	**<.001**
Prior contralateral bypass/PVI	1.07	1.01-1.13	**.033**
Prior contralateral major amputation	1.23	1.13-1.34	**<.001**
Level of Bypass			
Supra-geniculate	Reference	–	–
Infra-geniculate	1.11	1.06-1.17	**<.001**
Type of CLTI			
Rest pain	Reference	–	–
Tissue loss	1.52	1.42-1.63	**<.001**
Urgency			
Elective	Reference	–	–
Urgent	1.31	1.24-1.39	**<.001**
Emergent	1.38	1.24-1.54	**<.001**

aHR, Adjusted hazard ratio; *CAD*, coronary artery disease; *CHF*, congestive heart failure; *CI*, confidence interval; *CKD*, chronic kidney disease; *CLTI*, chronic limb-threatening ischemia; *eGFR*, estimated glomerular filtration rate; *ESRD*, end-stage renal disease; *GSVG*, great saphenous vein graft; *PVI*, peripheral vascular interventions; *RAAS*, renin-aldosterone-angiotensin system.
Boldface *P* values indicate statistical significance.

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INTERACTIVE POSTER SESSION

IP219

Sex Disparities in Infra-inguinal Prosthetic Bypass for Peripheral Artery Disease

Saranya Sundaram, Tyler Buckley, Elizabeth A. Genovese, Ravi Veeraswamy. Medical University of South Carolina, Charleston, SC

Objectives: Although prior studies have demonstrated sex-based differences in peripheral arterial disease (PAD), contemporary surgical outcomes remain under-characterized for women compared with men. We aim to discern differences in perioperative outcomes between men and women with PAD who received infra-inguinal prosthetic bypasses.

Methods: The Infra-Inguinal Bypass Vascular Quality Initiative registry was queried between 2010 and2020. We evaluated patients with infra-inguinal, prosthetic bypasses for occlusive disease, excluding patients with non-occlusive disease, asymptomatic disease, acute limb ischemia, and emergent procedures. Baseline demographics, comorbidities, prior medical and surgical management, and perioperative outcomes were compared between men and women using χ^2 analysis and *t* test. Socioeconomic status was defined using distressed community index. Bypass patency at 1 year was compared between prosthetic bypasses of the same inflow and outflow targets, using Kaplan-Meier analysis.

Results: We identified 28,845 infra-inguinal prosthetic bypasses, 36.8% of which were performed in women. Women were older and had a higher proportion of Black race, non-ambulatory status, and chronic obstructive pulmonary disease, and were from socioeconomically "distressed" communities (Table I). Men had a higher rate of smoking, cardiac disease, and heart failure; they were also more often on aspirin and statin both prior to intervention and upon discharge. A higher proportion of females were on P2Y inhibitors with high rates of prior lower extremity percutaneous transluminal angioplasty/stenting compared with men. Additionally, more women had preoperative vein mapping, although there was no significant difference in prior bypass history (coronary or peripheral). Men presented more often with claudication, had more distal disease with tibial outflow targets, and received concurrent ipsilateral endarterectomy (Table II). Alternatively, women more often presented with rest pain or tissue loss and had proximal disease with a higher proportion of popliteal outflow targets. Women did have less perioperative antibiotic use and slightly more postoperative infections. Fewer women were returned home or were ambulatory on discharge. There was no significant difference in 5-year cumulative survival (89% vs 88.3%; $P = .07$) or 1-year patency between males and females in femoral-above knee (58.1% vs 61.2%; $P = .069$), femoral-below knee (59.4% vs 56.7%; $P = .49$), or femoral-tibial (59.4% vs 55.7%; $P = .464$) bypasses.

Conclusions: Women present with a unique demographic, socioeconomic, and PAD disease pattern associated with diminished perioperative medical management and advanced disease severity at revascularization. With a history of higher rates of endovascular intervention, prior vein mapping without a cardiac or bypass history suggests that prosthetic is often used first in women potentially due to a more proximal target combined with inadequate conduit.

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INTERACTIVE POSTER SESSION

IP221

Single-center Experience with JETi Hydrodynamic Thrombectomy System for Arterial Occlusions of the Extremities

Chaitu Dandu, Kaitlyn Dobesh, Alexandra Yorks, Alexander D. Shepard, Mitchell Weaver, Alice Lee, Andi Peshkepija, Kevin Onofrey,