Nothing to disclose; **J. Kittredge**: Nothing to disclose; **P. Lall**: Nothing to disclose.

PVSS12.

Socioeconomic and Hospital-Related Predictors of Amputation for Critical Limb Ischemia

Antonia J. Henry[1], Nathanael Hevelone[2], Neal R. Barshes[1], Michael Belkin[1], Louis L. Nguyen[1]. [1]Brigham and Women's Hospital Division of Vascular and Endovascular Surgery, Boston, MA; [2]Brigham and Women's Hospital Center for Surgery and Public Health, Boston, MA

Objectives: Disparities in limb salvage procedures may be driven by socioeconomic status (SES) and access to high volume hospitals. We sought to identify SES factors associated with major amputation in the setting of critical limb ischemia (CLI).

Methods: The 2007 Nationwide Inpatient Sample was queried for discharges containing lower extremity revascularization (LER), major amputation, and chronic CLI (N = 152, 736). The Elixhauser method was used to adjust for comorbidities. Significant predictors in bivariate logistic regression were entered into a multivariate logistic regression for the dependent variable of amputation vs LER.

Results: Overall, 18.1% of CLI patients underwent amputation. Significant differences were seen between both groups in bivariate and multivariate analysis of SES factors, including race, income, and insurance status (Table 1). Lower income patients were more likely to be treated at low LER volume institutions (OR 1.44, $p = 0.017$). Patients at higher LER volume centers (OR 2.11, $p < 0.001$), admitted electively (OR 1.96, $p < 0.001$) and evaluated with diagnostic imaging (OR 4.30, $p < 0.001$) were more likely to receive LER.

Conclusions: After controlling for comorbidities, minority patients, those with lower SES, and patients with Medicaid were more likely receive amputation for CLI in low volume hospitals. Addressing SES and hospital factors may reduce amputation rates for CLI.

Table 1. Multivariate regression for amputation

	Odds Ratio for Amputation	*95% Confidence Interval*
Male gender	1.22 (p<0.001)	1.13, 1.32
Black vs White race	2.33 (p<0.001)	2.02, 2.69
Hispanic vs White race	1.37 (p<0.001)	1.16, 1.62
Median income		
<\$39, 000	1.25 (p=0.005)	1.08, 1.45
\$39, 000-47, 999	1.11 (p=0.159)	0.96, 1.28
\$48, 000-62, 999	1.03 (p=0.682)	0.88, 1.21
>\$63, 000	ref	
Private payer vs Medicare	0.83 (p=0.002)	0.74, 0.94
Medicaid vs Medicare	1.24 (p=0.015)	1.04, 1.48

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C11: Poster Presentation II -Peripheral Arterial Disease

PS122.

Genetic Influences on Peripheral Arterial Disease in a Twin Population

Carl Wahlgren[1], Patrik K. Magnusson[2]. [1]Department of Vascular Surgery, Karolinska University Hospital & Karolinska Institute, Stockholm, Sweden; [2]Department of Medical Epidemiology and Biostatistics, Karolinska Institute, Stockholm, Sweden

Objectives: The understanding of genetics in peripheral arterial disease (PAD) is still limited. The aim of this study was to analyze the contribution of genetic and environmental factors to the development of PAD in a large population-based sample of twins.

Methods: The Swedish Twin Registry was cross-linked with the Inpatient Registry, providing national coverage of discharge diagnoses. All twins with atherosclerosis of extremity arteries, including claudication and critical limb ischemia, were identified. Concordance rates and tetrachoric correlations were calculated for monozygotic (MZ) and dizygotic (DZ) twins. Structural equation modeling techniques, Mx-analyses, were used to estimate the contribution of genetic effects as well as shared and non-shared environmental factors to development of PAD.

Results: In the registry, 76977 twins were born between 1886 and 1957. There were 964 twins with PAD including 20 MZ and 22 DZ concordant pairs as well as 216 MZ and 664 DZ discordant pairs. The probandwise concordance rates for MZ and DZ pairs were 15.6% and 6.2%, respectively. The tetrachoric correlations were 0.52 in MZ pairs and 0.30 in DZ pairs. The odds ratio was 16.4 (95% CI: 9.8-27.4) for MZ twins and 5.6 (95% CI: 3.6-8.7) for DZ twins. In the structural equation models, genetic effects accounted for 44 % (95% CI: 0.16-0.61), shared environmental effects for 8.0 % (95% CI: 0-0.28), and non-shared environmental effects for 48% (95% CI: 0.39-0.59) of the phenotypic variance among twins.

Conclusions: Heritability is an important component along with unique environmental factors for development of PAD. Concordances and correlations were higher in MZ compared with DZ twins, indicating genetic influences in PAD. The twin of an MZ twin with PAD had a risk of PAD that was 16 times that of the MZ twin of a person without PAD. A better understanding of the genetics in PAD could identify individuals at increased risk who may benefit from targeted therapies.