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Vascular Medicine

TYPE OF FAMILY HISTORY AND PREVALENCE OF PERIPHERAL ARTERY DISEASE

Poster Contributions

Poster Sessions, Expo North

Saturday, March 09, 2013, 10:00 a.m.-10:45 a.m.

Session Title: Atherosclerosis, Inflammation, Biomarkers and Outcomes: What's New?

Abstract Category: 35. Vascular Medicine: Non Coronary Arterial Disease

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Authors: Sunny Shah, Caron Rockman, Yu Guo, Manesh Patel, Mark Adelman, Thomas Riles, Jeffrey Berger, New York University Langone Medical Center, New York, NY, USA

Background: While family history of vascular disease is associated with the prevalence of coronary artery disease (CAD) and cerebrovascular disease (CVD), its association with peripheral artery disease (PAD) is less certain. Furthermore, the precise association between type of family history and PAD is unknown.

Methods: 2.8 million US adults underwent ankle brachial index screening and self-reported demographics, risk factors and family history in a vascular screening program. PAD was defined as ABI <0.9. Family history of PAD (surgery or procedure to improve blood flow to the legs), CAD (heart attack or coronary revascularization), and CVD (stroke or transient ischemic attack) in a first degree relative before age 60 was collected. Multivariate logistic regression analysis was used to estimate odds of PAD.

Results: Subjects with PAD were more likely to have a family history of PAD (4.6% vs 2.8%, $p < 0.001$), CAD (20.3% vs 16.3%, $p < 0.001$), and CVD (11.6% vs 8.9%, $p < 0.001$), than those without PAD. After multivariate adjustment, family history of PAD was associated with a 52% increase in PAD prevalence, compared to a modest 9% and 5% increase in PAD for family history of CAD and CVD, respectively (Table 1).

Conclusion: In a very large population based study, family history of PAD was an independent risk factor for PAD prevalence. While family history of CAD or CVD was statistically associated with PAD, the strength of association was weak, highlighting the importance of family history questions specific for PAD.

Table 1: Association between family history of PAD, CAD, and CVD and prevalence of PAD

	OR (95% CI) for FH of PAD	P-value	OR (95% CI) for FH of CAD	P-value	OR (95% CI) for FH of CVD	P-value
No PAD	-1-		-1-		-1-	
Any PAD						
Unadjusted	1.64[1.60,1.69]	<0.001	1.31[1.29,1.33]	<0.001	1.34[1.32,1.36]	<0.001
Demographics*	1.84[1.79,1.90]	<0.001	1.39[1.37,1.41]	<0.001	1.31[1.28,1.33]	<0.001
Demographics + risk factors**	1.68[1.63,1.73]	<0.001	1.27[1.25,1.28]	<0.001	1.21[1.19,1.23]	<0.001
Demographics + risk factors + any concomitant cardiovascular disease***	1.52[1.48,1.57]	<0.001	1.09[1.08,1.11]	<0.001	1.05[1.03,1.07]	<0.001
*Demographics: age, sex, and ethnicity						
**Demographics (as above) + Risk factors: smoking, diabetes mellitus, hypertension, hyperlipidemia						
***Demographics (as above) + Risk factors (as above) + Any co-prevalent cardiovascular disease: presence of coronary artery disease and/or cerebrovascular disease						