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VASCULAR DISEASE

SOCIOECONOMIC STATUS AND PERIPHERAL ARTERY DISEASE IN US ADULTS: NHANES 99-04

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

Monday, April 04, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Peripheral Arterial/Carotid Disease/Aortic Disease
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Background: Lower socioeconomic status (SES) is associated with cardiovascular disease. The factors that account for the association of low SES with vascular disease are not well understood. We aimed to explore the association between SES and peripheral artery disease (PAD) in the United States.

Methods: We analyzed data from the National Health and Nutrition Examination Study (NHANES) 1999-2004. PAD was defined as ABI \leq 0.90. SES categories were based on the poverty-income ratio (PIR), a ratio of self-reported income relative to the poverty threshold with PIR < 1 indicating income below poverty level. Odds ratios (OR) and 95% CI were estimated by logistic regression accounting for NHANES' complex sampling design.

Results: Of 6791 eligible participants, overall weighted prevalence of PAD was 5.8% (SE 0.3). PAD prevalence was significantly higher (8.4% \pm 1.1) in individuals in the lowest SES category (with PIR indicating income below poverty) compared to those in the highest SES category (3.4% \pm 0.5). Individuals in the lowest SES category had more than a 2-fold increased odds of PAD compared to those in the highest SES category (OR 2.57, 95% CI 1.8-3.6, $p < 0.001$), with each lower SES category conferring a 35% increased odds of PAD (OR 1.35, 95% CI 1.27-1.4, p trend < 0.001). This association between lower SES and PAD remained significant even after full multivariable adjustment for age, gender, race/ethnicity, diabetes, hypertension, smoking, and hyperlipidemia, CRP, existing cardiovascular disease, chronic kidney disease, congestive heart failure, body mass index, education, insurance status, and physical activity (OR 1.12, 95% CI 1.03-1.21, $p = 0.005$).

Conclusions: Low SES is associated with peripheral artery disease in US adults even after extensive multivariable adjustment for demographics, atherosclerotic risk factors, and additional socioeconomic variables. These data suggest that there are additional unmeasured variables that may account for the association of poor socioeconomic status and vascular disease beyond traditional risk factors. Identification and management of these unrecognized variables may allow improved PAD prevention among individuals of low socioeconomic status.