Chronic CAD/Stable Ischemic Heart Disease

ETIOPATHOGENIC DIFFERENCES IN CORONARY ARTERY DISEASE AND PERIPHERAL ARTERY DISEASE: RESULTS FROM NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES) 1999-2004

ACC Moderated Poster Contributions
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Although coronary artery disease (CAD) and peripheral artery disease (PAD) represent systemic atherosclerosis, there are several differences between the two vascular beds. We aimed to determine etiopathogenetic differences between CAD and PAD, using a large national database.

Methods: Cross-sectional data from NHANES 1999-2008 were merged. History of CAD was determined using standardized questionnaire. PAD was defined as ankle brachial pressure index <0.9.

Results: In comparison to CAD, a greater proportion of individuals with PAD were females (65% vs 41%), blacks (16% vs 7%) and active smokers (30% vs 24%). After adjustment for demographic and clinical characteristics, patients with PAD had significantly higher serum concentrations of LDL, triglycerides and C-reactive protein (CRP). Among active smokers, the risk of PAD (OR(95%CI):2.82(2.20-3.61)) was observed to be significantly higher than the risk of CAD (OR(95%CI):1.60(1.10-2.34)). The risk of CAD increased with cotinine levels >0.02ng/mL. However, the risk of PAD increased only with cotinine levels >138 ng/mL. With respect to CRP, the risk of CAD and PAD tended to increase with CRP>0.25mg/dL. However, the risk of PAD was higher than the risk of CAD with increasing CRP levels.

Conclusions: CAD and PAD differ with respect to gender, race, smoking status, serum LDL, triglycerides and CRP concentrations. Relationship between PAD and cotinine demonstrated a threshold phenomenon, with the risk of PAD increasing only with cotinine>138ng/mL.

Figure 1: A: OR for CAD plotted against cotinine divided into five quantiles. B: OR for PAD plotted against cotinine divided into 10 quantiles.