Self-rated stress is non-contributory to CAD in higher socio-economic strata

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Stress has been associated with coronary artery disease (CAD), yet the contribution of socio-economic status (SES) has not been addressed. The aim of this study is to determine if stress assessment is associated with CAD independent of SES, and is incremental to the Framingham Score. The study group consisted of 325 executive patients undergoing comprehensive health assessment. Stress was assessed utilizing the validated instrument of “Self-Rated Stress” (SRS). Coronary artery calcification (CAC) served to assess the degree of atherosclerosis, a CAD equivalent and risk assessment tool. The relationship between SRS and CAC was assessed, with adjustment by potential confounders including lifestyle factors. CAC was modeled by a variety of cut points (>0, >5, >100, >200) for the test of trend across stress levels per Mantel-Haenszel Chi Square (1df) with non-significant P-values of 0.9960, 0.5242, 0.1692, 0.3233 respectively. A logistic regression model with SRS as a categorically ranked and continuous variable to predict binary outcome of calcification yielded P-values of 0.2366 and 0.9644; this relationship, further adjusted by age, fruit and vegetable consumption, exercise, and education, yielded no statistically significant association. No improvement of fit was observed for the established Framingham Score to CAC relation utilizing SRS. CONCLUSIONS: 1) SRS did not play a role in early CAD when controlling for low SES. 2) SRS did not add predictive value beyond patient age or calculated Framingham risk. Future studies should focus on additional validated instruments of stress to differentiate between subtypes of stress for varying SES strata.