Calcium Marker Seen More Often in Less Educated

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Body

Education level is inversely related to coronary artery calcium level, Lijing L. Yan, Ph.D., and colleagues have reported.

Subjects with less than a high school degree were four times more likely to have the marker than were those with more than a college degree. Preexisting cardiovascular risk factors were partly responsible, but even after adjusting for them, the risk differential remained highly significant, said Dr. Yan of Northwestern University, Chicago, and coauthors (JAMA 2006;295:1793–800).

The reason for the difference in coronary artery calcium (CAC) is something of a mystery, the researchers noted. Education-related health care discrepancies usually occur because of differences in income, socioeconomic status, access to care, adherence to therapy, and ability to navigate the health care system. "However, the association between education and CAC observed in our study was not affected by these factors related to access or treatment, because CAC is not symptomatic and the study was conducted among a relatively healthy cohort of early middle-aged adults without concurrent overt diseases," Dr. Yan and colleagues wrote.

The investigators extracted data from the large prospective observational study, ***Coronary Artery Risk Development in Young Adults*** (CARDIA). The study examined risk factors in 3,672 urban adults (45% black and 54% female). Data were collected at baseline (ages 18–30 years) and 15 years later (ages 33–45 years). CAC scores were assessed by CT at the 15-year follow-up in 3,043 of the participants.

Comparing the 15-year data to baseline, the investigators found that significant increases in blood pressure, waist circumference, body mass index, smoking, and percentage taking antihypertensive medication were inversely associated with education.

After adjusting for age, gender, and race, those with less than a high school degree were four times more likely to have CAC than were those with more than a college degree.

The risk also was significantly elevated in high school graduates (odds ratio 1.9), those with some college (1.5), and college graduates (1.2).

The differential decreased after adjusting for cardiovascular risk factors (baseline systolic blood pressure, smoking, waist circumference, physical activity and total cholesterol levels), but was still significant for those with less than a high school degree (odds ratio 2.6).

"Fundamental changes in preventive measures very early in life are required to address social and economic disparities in health," the authors said. "In addition, integrated prevention and intervention strategies effective for less educated persons are needed."

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