A new way to predict risk of heart attacks and stroke

By ACSH Staff — August 19, 2011

Doctors typically prescribe statin medications to treat patients with high cholesterol; however, those with normal cholesterol levels may still be at risk of heart attack and stroke if they have elevated levels of coronary artery calcium (CAC). Those are the findings [1] from a new study [2] published in the European Society of Cardiology special issue of The Lancet and led by Dr. Michael J. Blaha of the Ciccarone Center for the Prevention of Heart Disease at Johns Hopkins Hospital.

Dr. Blaha and his colleagues found that determining a patient’s level of CAC, which is a direct measure of the thickening of the coronary arteries from an accumulation of fatty deposits, may better identify patients most likely to benefit from statin treatment. Up to now, such patients have been identified by looking at their levels of C-reactive protein (CRP), but the latest findings suggest that CAC levels are a more reliable indicator.

The Lancet study involved 950 patients with normal cholesterol but elevated CRP levels. Using a CT scan of the heart to measure CAC levels in this cohort, researchers found that nearly three-quarters of all coronary events occurred in patients with high CAC levels.

Just the simple presence of CAC was associated with a four-fold increased risk of coronary heart disease. Based on their findings, the authors recommend using CAC levels as the primary means preventing cardiovascular disease in patients with normal cholesterol who have other risk factors, including obesity, pre-diabetes, or a family history of heart disease.

Noting that CAC seems to have a better predictive value than CRP for significant coronary events, ACSH’s Dr. Gilbert Ross says, This noninvasive technique should be considered for patients whose vascular risk needs to be assessed. However, he cautions, The temptation to screen everyone should be avoided, since the likelihood of false positives rises if the pre-test likelihood of disease is low.

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