Prevalence, prognostic implications of coronary artery calcification in women at low CVD risk

November 15 2016

Among women at low risk of atherosclerotic cardiovascular disease (ASCVD), coronary artery calcium was present in approximately one-third and was associated with an increased risk of ASCVD and modest improvement in prognostic accuracy compared with traditional risk factors, according to a study published online by *JAMA*. The study is being released to coincide with its presentation at the American Heart Association's Scientific Sessions 2016.

Cardiovascular disease (CVD) is a major health problem for women worldwide. The role of coronary artery calcium (CAC) testing for guiding preventive strategies among women at low CVD risk based on the American College of Cardiology and American Heart Association CVD prevention guidelines is unclear. Coronary artery calcium scanning allows for the detection of subclinical coronary atherosclerosis, and the presence of CAC in asymptomatic individuals is associated with higher risk for coronary heart disease (CHD) and all-cause mortality.

Maryam Kavousi, M.D., Ph.D., of Erasmus University Medical Center, Rotterdam, the Netherlands and colleagues assessed the potential utility of CAC testing (by computed tomography) for CVD risk estimation and stratification among low-risk women. The study included women with 10-year ASCVD risk lower than 7.5 percent from 5 large population-based cohorts.

Among 6,739 women with low ASCVD risk from the 5 studies, average age ranged from 44 to 63 years and CAC was present in 36 percent. Across the cohorts, median follow-up ranged from 7 to 11.6 years. A total of 165 ASCVD events occurred (64 nonfatal heart attacks, 29 CHD deaths, and 72 strokes). Compared with the absence of CAC (CAC = 0), presence of CAC (CAC greater than 0) was associated with an increased risk of ASCVD. Coronary artery calcium was associated with modest improvement in prognostic accuracy compared with traditional risk factors.

"Further research is needed to assess the clinical utility and cost-effectiveness of this additional accuracy," the authors write.

"The decision regarding the use of CAC among low-risk women needs to consider the broader context and whether any additional testing is justifiable vs simply treating all such women with statins based on risk factor scores alone."

More information: *JAMA*, DOI: 10.1001/jama.2016.17020

Provided by The JAMA Network Journals