Analysis supports use of risk equations to guide statin therapy

March 29 2014

In an analysis of almost 11,000 patients, an assessment of equations that help guide whether a patient should begin taking a statin (cholesterol lowering medication) found that observed and predicted 5-year atherosclerotic cardiovascular disease risks were similar, suggesting that these equations are helpful for clinical decision making, according to a *JAMA* study released online to coincide with presentation at the 2014 American College of Cardiology Scientific Sessions.

The American College of Cardiology (ACC) and the American Heart Association (AHA) recently published the 2013 Guideline on the Assessment of Cardiovascular Risk. As part of this guideline, a group of experts developed the Pooled Cohort risk equations, which were designed to estimate 10-year risk for nonfatal myocardial infarction (MI; heart attack), coronary heart disease (CHD) death, and nonfatal or fatal stroke, according to background information in the article.

Paul Muntner, Ph.D., of the University of Alabama at Birmingham, and colleagues examined the Pooled Cohort risk equations in adults (age 45 to 79 years) enrolled in the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study between January 2003 and October 2007, and followed up through December 2010. The researchers studied participants for whom atherosclerotic CVD risk may trigger a discussion of statin initiation (patients without clinical atherosclerotic CVD or diabetes, low-density lipoprotein cholesterol level between 70 and 189 mg/dL, and not taking statins; n = 10,997). Additional analyses, limited to Medicare beneficiaries (n = 3,333),

added atherosclerotic CVD events identified in Medicare claims data.

Among the study population (n=10,997) for whom statin treatment should be considered based on atherosclerotic CVD risk there were 338 events (192 CHD events, 146 strokes). The researchers found that the observed and predicted 5-year atherosclerotic CVD incidence rates were similar.

There were 234 atherosclerotic CVD events (120 CHD events, 114 strokes) among the subset of Medicare beneficiaries and the observed and predicted 5-year atherosclerotic CVD incidence rates were also similar for the various risk categories in this population.

"These findings support the validity of the Pooled Cohort risk equations to inform clinical management decisions," the authors write. "Because the Pooled Cohort risk equations were designed to estimate 10-year atherosclerotic cardiovascular disease risk, studies are needed to ensure its accurate calibration over a longer duration."

More information: DOI: 10.1001/jama.2014.2630

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