
Routine CCTA Screening Not Necessary For Diabetics



In a recent study published in *JAMA* and presented at the American Heart Association's Scientific Sessions 2014, Joseph B. Muhlestein, MD, and colleagues at the Intermountain Medical Center Heart Institute in Murray, Utah (USA) examined whether screening patients with diabetes deemed to be at high cardiac risk using coronary computed tomographic angiography (CCTA) would result in a significant long-term reduction in death, heart attack, or hospitalisation for unstable angina.

One of the most important risk factors for coronary artery disease (CAD) is diabetes mellitus. Diabetics are often at a high risk of developing severe but asymptomatic CAD, one of the most common causes of death in patients with diabetes.

CCTA offers the opportunity to evaluate the coronary anatomy non-invasively and allows healthcare providers to ascertain the overall extent and severity of coronary atherosclerosis. However, whether CCTA screening can affect changes in treatment and can eventually lead to a reduction in cardiac events is yet to be proven.

This study was conducted with 900 patients with types 1 or 2 diabetes of at least three to five years' duration and without symptoms of CAD. The patients were recruited from 46 clinics and practices in Utah. 452 patients were assigned to CAD screening with CCTA, and 448 patients were assigned to standard national guidelines-based optimal diabetic care.

At the follow-up time of four years, the primary outcome event rates (composite of all-cause death, nonfatal heart attack, or unstable angina requiring hospitalisation) were not significantly different between the CCTA and the control groups (6.2 percent [28 events] vs 7.6 percent [34 events]). The incidence of the composite secondary end point of ischaemic major adverse cardiac events (CAD death, nonfatal heart attack, or unstable angina) also did not differ between groups (4.4 percent [20 events] vs 3.8 percent [17 events]).

The authors conclude that, "Coronary computed tomographic angiography involves significant expense and radiation exposure, so that justification of routine screening requires demonstration of net benefit in an appropriately high-risk population. These findings do not support CCTA screening in this population."

In an accompanying editorial, Raymond J. Gibbons, MD, of the Mayo Clinic in Rochester (MN, USA), supports the study conclusion that future randomised trials of cardiac imaging in asymptomatic patients with diabetes should be larger and focused on an enriched study population at higher risk. He also reiterated that guideline-directed medical therapy for hypertension and hyperlipidaemia is effective in asymptomatic patients with diabetes and should be implemented more consistently. If the newly published standards by Intermountain Healthcare are applied effectively, diabetics are less likely to be at risk for major cardiovascular events.

Source: JAMA

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