

#RSNA14: Study Finds Mild CAD Puts Diabetic Patients at Risk



Diabetic patients with even mild coronary artery disease (CAD) face the same relative risk for a heart attack or other major adverse heart events as diabetics with serious single-vessel obstructive disease, according to a new long-term study. Researchers reviewed data from the Coronary CT Angiography Evaluation For Clinical Outcomes: An International Multicenter (CONFIRM) Registry, which was developed to examine the prognostic value of cardiac computed tomography angiography (CCTA) for predicting adverse cardiac events related to CAD.

The study, conducted by researchers from the University of British Columbia and St. Paul's Hospital in Vancouver, Canada, was presented at the annual meeting of the Radiological Society of North America (RSNA) in Chicago, Illinois.

"The CONFIRM Registry is the largest long-term data set available and allowed us to evaluate the long-term prognostic value of CCTA in diabetic patients," said co-author Jonathan Leipsic, MD, vice chairman of the Department of Radiology at the University of British Columbia. The registry, which has CCTA data on 40,000 patients from 17 centres around the world, now has five-year follow-up data on 14,000 patients.

Dr. Leipsic and colleagues studied data on 1,823 diabetic patients who underwent CCTA to determine the extent of CAD, in which a waxy substance called plaque builds up within the arteries of the heart. This plaque buildup causes the artery wall to thicken, thus limiting or in some cases completely obstructing blood flow.

In the study, patients (median age 61.7) were grouped as having no CAD, mild CAD (less than 50 percent of coronary artery narrowed), or obstructive CAD (more than 50 percent artery obstruction). Over a 5.2-year follow-up period, there were 246 deaths recorded, representing 13.5 percent of the total study group.

According to the research team, major adverse cardiovascular event (MACE) data were available on 973 patients. During the follow-up period, 295 (30.3 percent) of the patients experienced a MACE such as heart attack or a procedure to re-open an obstructed artery called a coronary revascularisation. Analysis of the data showed that:

- Both obstructive and mild (or nonobstructive) CAD as determined by CCTA were related to patient deaths and MACE.
- The relative risk for death or MACE for a patient with mild CAD was comparable to that of patients with single-vessel obstructive CAD.

"Until now, two-year follow-up studies suggested that a diabetic patient with mild or nonobstructive coronary artery disease had a lower risk of major adverse cardiovascular events and death than patients with obstructive disease," said co-author Philipp Blanke, MD, radiologist at the University of British Columbia and St. Paul's Hospital. "Our five-year follow-up data suggests that nonobstructive and obstructive coronary artery disease as detected by cardiac CTA in diabetic patients are both associated with higher rates of mortality."

Dr. Leipsic also noted that researchers need a better understanding of the evolution of plaque in the arteries and patient response to therapies. "Cardiac CT angiography is helpful for identifying diabetic patients who are at higher risk for heart events, who may benefit from more aggressive therapy to help modify that risk," the doctor added.

Source: RSNA
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