Cardiovascular Business
PATIENT, PRACTICE & TECHNOLOGY MANAGEMENT

PORTAL EXCLUSIVES

SCCT: Calcium scoring may cut chest pain hospitalizations and costs

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Central Arizona Heart Specialists
Chandler Regional
Mercy Gilbert Medical Centers
Society of Cardiac Computed Tomography

Person
Roger Bies

Topic
calcium scoring
chest pain triage
coronary artery calcium score
emergency chest pain protocol
myocardial infarction
TIMI

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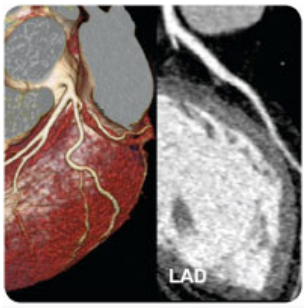

Coronary CT angiography study rules out coronary artery disease in a 58-year-old asymptomatic man with multiple cardiovascular risk factors. A dose length product of 67 mGycm corresponds to an effective radiation dose equivalent of 0.94 mSv. Source: U. Joseph Schoepf, Medical University of South Carolina, Charleston.

Integrating calcium scoring into the emergency department workup of low-risk chest pain patients may cut costs and reduce missed myocardial infarctions, according to research presented at the Society of Cardiac Computed Tomography (SCCT) conference in July.

With a cost of more than $10 billion annually, emergency department (ED) chest pain visits represent a hefty financial burden in the U.S. Yet, the incidence of coronary disease in this population is fairly low; estimates range from 15 to 25 percent.

Researchers from Chandler Regional Medical Center in Chandler, Ariz., compared the economic impact of coronary artery calcium scoring to traditional risk assessment in the ED. The study included prospective and retrospective arms. The prospective group was comprised of 609 patients over the age of 40 who presented with chest pain and no known coronary diseases to the EDs of two community hospitals. Patients included in the study had TIMI scores of 0, 1, 2 and normal cardiac enzymes and EKG results, explained Roger Bies, MD, of Central Arizona Heart Specialists in Chandler.

Physicians obtained a calcium score for each patient and discussed the results on the cardiologist on call. Bies and colleagues compared the data to a control group of 405 retrospective patients who met inclusion criteria and were treated the year before the addition of before calcium scoring protocol.

Researchers compared length of stay, hospital charges and clinical outcomes for the two groups. Sixty-three percent of the patients had a coronary artery calcium score of zero, and 61 percent were discharged following a negative coronary artery calcium score. In contrast, 11 percent of patients in the control group were discharged.

Patients with positive coronary artery calcium scores were admitted and had an average length of stay of 0.66 days compared to an average length of stay of 1.67 days for patients in the control group.

Charges for coronary artery calcium scores patients were reduced by $8,663 per patient in the calcium score group, which saved each hospital $5 million per year, wrote Bies.

“The addition of calcium scoring to the ED triage of low risk chest pain patients can reduce hospitalization and costs,” concluded Bies, who added that the routine use of calcium scoring in the ED may reduce missed myocardial infarctions by encouraging

workup of patients with positive scores; however, further research is required to validate routine use.

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