SOCIETY OF CARDIOVASCULAR COMPUTED TOMOGRAPHY

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CT-STAT Trial Finds CCTA Superior to MPI for Diagnosis of Early, Low-Risk Chest Pain in the Emergency Room

Vienna, VA (September 21, 2011) – The Coronary Computed Tomographic Angiography for Systematic Triage of Acute Chest Pain Patients to Treatment (CT-STAT) trial, a multi-center trial published in the September 27, 2011 issue of the *Journal of the American College of Cardiology* suggests that employing early coronary computed tomographic angiography (CCTA) is faster and less costly than employing rest-stress myocardial perfusion imaging (MPI) in the evaluation of acute low-risk chest pain in the Emergency Department.

The study, led by Dr. James A. Goldstein and Dr. Gilbert L. Raff of William Beaumont Hospital, Royal Oak, MI, ran between June 2007 and November 2008. Low risk patients were randomized to diagnosis via CCTA or MPI, and followed up over a period of six months. The two strategies were compared as to the time for diagnosis, safety (no major adverse cardiac events in patients with normal index tests), and the cost of care in the Emergency Department.

The study demonstrated that CCTA patients were diagnosed 54% faster than MPI patients, and the total costs of care were 38% lower with the CCTA group. This is significant, given that the cost of each MPI test itself was only slightly greater than the cost for each CCTA test. Major adverse cardiac events were no different for each diagnostic strategy. The CCTA patients were also exposed to less radiation than the MPI patients (11.5 mSv vs 12.8 mSv, p=0.02).

About eight million patients in the U.S. require emergency department evaluation for acute chest pain annually. Given the extensive testing required to diagnose or rule out a heart attack in low risk patients without obvious signs, these trial results should have a huge impact in regards to selecting CCTA as a method that is both more efficient and cost-beneficial.

"This is one of the first true, prospective, comparative-effectiveness trials comparing CTA to MPI. It clearly showed that the CTA strategy was just as safe as the MPI strategy in patients in the Emergency Department, but CTA is a much more efficient and cost-

effective strategy," says Dr. Szilard Voros, the chair of SCCT's Research and Clinical Trials Committee. "This study is a true paradigm-shift, showing that the most appropriate, state-of-the-art strategy to triage patients in the Emergency Department without prior revascularization is CTA. In light of this study, there should be no doubt that wherever available and whenever possible, a CTA-strategy should be utilized to triage patients in the Emergency Department."

According to Dr. Gilbert Raff, the primary study investigator, “The results of this study have been duplicated clinically in the busy Emergency Departments at William Beaumont Hospitals over the last 5 years, however patient selection is important. Patients with EKG evidence of acute ischemia or prior known coronary disease require alternative methods. In appropriate patients, CTA provides rapid, definitive exclusion of coronary disease allowing early discharge in most cases. In addition, CTA can reveal important non-cardiac thoracic disease not diagnosable by stress testing.”

The abstract of the article can be viewed here.

Insert link: http://content.onlinejacc.org/cgi/content/short/58/14/1414

About the Society of Cardiovascular Computed Tomography
(SCCT) is the professional society devoted exclusively to cardiovascular computed tomography (CCT). With a membership of approximately 3,500, it is acknowledged and recognized as the representative and advocate for research, education, and clinical excellence in the use of cardiovascular computed tomography. For more information on the Society’s Mission and Goals, please see the SCCT Website at: www.SCCT.org.

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