

Cardiology today

NEWS & PERSPECTIVE FOR THE CARDIOVASCULAR SPECIALIST

Coronary CTA yielded higher diagnostic ability than perfusion in ACCURACY substudy

By

Coronary CTA demonstrated a high level of diagnostic accuracy compared with myocardial perfusion imaging when both were compared with invasive coronary angiography.

The researchers enrolled 43 patients from the ACCURACY trial who were scheduled for invasive angiography and who had no known previous CAD. All patients underwent myocardial perfusion imaging and coronary CTA within six weeks before invasive coronary angiography.

According to the study results, the sensitivity of CTA diagnosing $\geq 50\%$ stenosis vs. invasive angiography was 80% (95% CI, 44.4%-97.5%); specificity was 93.8% (95% CI, 79.2%-99.2%); positive predictive value was 80% (95% CI, 44.4%-97.5%); and negative predictive value was 93.8% (95% CI, 79.2%-99.2%). For stenosis $\geq 70\%$, the sensitivity of CTA was 75% (95% CI, 19.4%-99.4%); specificity was 89.5% (95% CI, 75.2%-97.1%); positive predictive value was 42.9% (95% CI, 9.9%-81.6%); and negative predictive value was 97.1% (95% CI, 85.1%-99.9%).

The CTA diagnostic ability was higher than that demonstrated with myocardial perfusion imaging vs. invasive angiography for both $\geq 50\%$ and $\geq 70\%$ stenosis for sensitivity, specificity, positive predictive value and negative predictive value ($P < .001$ for all) in every category except for sensitivity in $\geq 70\%$ stenosis.

“There was a high sensitivity, specificity, positive predictive value and negative predictive value of multidetector CT in detecting significant lesions found on invasive coronary angiography in patients presenting with chest pain and no known history of CAD,” **Matthew J. Budoff, MD**, an associate professor of medicine at the Harbor-Los Angeles Biomedical Research Institute at the University of California Los Angeles, told an audience in his presentation. “There was a high sensitivity and specificity of multidetector CT in diagnosing coronary lesions seen on invasive coronary angiography compared with myocardial perfusion imaging, and our results are comparable to previously published studies.” – *by Eric Raible*

Budoff MJ. #89. Presented at: Society of Cardiovascular Computed Tomography 4th Annual Scientific Meeting; July 16-19, 2009; Orlando, Fla.