Newer cardiac imaging machines effective in detecting coronary artery stenosis

26 August 2008

The first multicenter study of the accuracy of some of the latest cardiac imaging technology found it was 99 percent as effective in ruling out obstructive coronary artery stenosis - or narrowing of these arteries – as the more expensive and invasive coronary angiography traditionally used by physicians, according to research published online by the *Journal of the American College of Cardiology.*

Matthew J. Budoff, M.D., a principal investigator at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center (LA BioMed), is the lead author of the study conducted at 16 different sites with 230 research volunteers with chest pain but no known coronary artery disease.

"The research found this noninvasive method of cardiac imaging will effectively detect stenosis – a constriction or narrowing – of the coronary arteries which can lead to heart attacks and may require surgery to repair," Dr. Budoff said. "This is good news for patients who, in the past, might have been forced to undergo a more expensive and invasive procedure to determine if they suffered from blockages in the arteries leading to their hearts."

In the study, each of the research volunteers was examined using some of the newer cardiac CT technology - electrocardiographically gated 64-multidetector row coronary computed tomographic angiography (CCTA). Each volunteer also underwent the more expensive and invasive coronary angiography, which is often called the "gold standard" for evaluating coronary artery stenosis.

The researchers found CCTA provided high diagnostic accuracy for detection of obstructive coronary stenosis at the thresholds of a 50 percent narrowing and at 70 percent stenosis. It also found CCTA was accurate 99 percent of the time in ruling out coronary artery stenosis.

The study is entitled "Diagnostic Performance of 64-Multidetector Row Coronary Computed Tomographic Angiography for Evaluation of Coronary Artery Stenosis in Individuals Without Known Coronary Artery Disease." It may be viewed on the *Journal of the American College of Cardiology* website: content.onlinejacc.org/ under "Fast Track" study listings.

Source: UCLA Medical Center

APA citation: Newer cardiac imaging machines effective in detecting coronary artery stenosis (2008, August 26) retrieved 7 September 2022 from https://medicalxpress.com/news/2008-08-cardiac-imaging-machines-effective-coronary.html