コンピュータ断層冠動脈造影の価値（CORE-64）

CORE-64トライアルの結果、多列検出器コンピュータ断層撮影（MDCT）による冠動脈造影は従来の冠動脈造影技術の代わりとなる可能性が示唆された

CORE-64 trial suggests multidetector computed tomography angiography may replace conventional technique for diagnosis of coronary artery disease

64列MDCTによる非侵襲的冠動脈造影は、一部の患者の初回の冠動脈造影に関して、従来の冠動脈造影技術の代わりとなる可能性のあることが、American Heart AssociationのLate-Breaking Clinical Trialセッションで発表された。アジアを含む国際試験であるCORE-64トライアルでは、冠動脈疾患疑いにより従来の冠動脈造影を予定されていた患者291人において検査を比較した。カルシウムスコアが600未満の患者においては、血行再建術の適応となる病変を有する患者を検出するのに、コンピュータ断層撮影の診断能は従来の冠動脈造影と同等であった。コンピュータ断層撮影は、従来の冠動脈造影と比較し、どの血管に狭窄があるかを特定する能力は低かった。

Full Text

Noninvasive 64-row multidetector computed tomography angiography may replace conventional angiography for initial diagnosis of coronary artery disease in selected patients, according to a late-breaking clinical trial presentation at the annual meeting of the American Heart Association.

The Coronary Artery Evaluation Using 64-Row Multidetector Computed Tomography Angiography trial (CORE-64), the first study of its kind, evaluated the diagnostic accuracy of multi-detector spiral CT angiography compared with conventional coronary angiography. A total of 291 patients in nine centers internationally were evaluated: There were three centers in the United States and one each in Brazil, Germany, Japan, the Netherlands, Canada and Singapore.

All patients were scheduled to undergo conventional angiography for suspected coronary artery disease. Patients first underwent coronary calcium imaging and scoring followed by computed tomographic angiography prior to cardiac catheterization. Both sets of images were analyzed by independent core laboratories.

Computed tomographic angiography was performed using 0.5-mm slice thickness with 64 simultaneous detector rows. More than 98 percent of coronary arteries as small as 1.5 mm in diameter could be seen.

Noninvasive imaging had good diagnostic ability for detecting blockages greater than 50 percent occluded (sensitivity, 85 percent; specificity, 90 percent). Furthermore, computed tomographic angiography had diagnostic ability comparable with that of conventional angiography in its ability to identify patients who had sufficiently severe disease to be referred for angioplasty or bypass surgery, although it was less able to determine specifically which artery was blocked compared with conventional angiography.

"In patients with suspected coronary artery disease (CAD) and calcium scores less than 600, 64-row MDCTA can assess the presence of significant CAD and the likelihood physicians will refer for coronary revascularization," said Julie M. Miller, MD, lead investigator of the study and assistant professor of medicine at Johns Hopkins Hospital, Johns Hopkins University in Baltimore, Md. "The strong performance of 64-row MDCT in this multicenter trial supports its use as a diagnostic test to help us diagnose symptomatic patients who may have significant coronary obstruction. "

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