経皮的冠動脈インターベンション後の予後予測（COURAGE）

COURAGEサブスタディにより、経皮的冠動脈インターベンションの恩恵を被るであろう患者を見極める上でのsingle photon emission computed tomography（SPECT）の有用性が示された

COURAGE substudy shows value of single photon emission computed tomography in identifying who will benefit from percutaneous coronary intervention

Single photon emission computed tomography（SPECT）により、冠動脈狭窄を有する患者のうち薬物療法単独よりも経皮的冠動脈インターベンションを施行した方が有益性が得られるであろう患者を見極めることが可能である、とAmerican Heart AssociationのLate-Breaking Clinical Trialセッションで発表された。COURAGEトライアルの核医学サブスタディにおいて研究者らは、313人の患者を、薬物療法のみまたは薬物療法とインターベンションの併用による治療の前後に画像診断を行った。フォローアップの画像診断時に、併用療法群においては虚血が2.7%減少していたのに対し薬物療法のみの群における減少は0.5%であった。また一方、ハイリスクの虚血（虚血心筋が10%を超える）を有した状態でスタディに参加した患者においては、薬物単独療法よりも併用療法の方が虚血を軽減するのにより有効であった。この結果から、このサブグループは経皮的インターベンションにより最も利益を得やすい群であることが示唆された。

Full Text

Single photon emission computed tomography (SPECT) can identify which patients with blockage secondary to coronary artery disease will benefit more from percutaneous coronary intervention than medical therapy alone, according to a late-breaking clinical trial presentation at the annual meeting of the American Heart Association.

Myocardial perfusion SPECT is a nuclear imaging technique that assesses blood flow in the heart by taking a series of images after injecting a radioactive tracer into peripheral blood.

In a nuclear substudy of the Clinical Outcomes Using Revascularization and Aggressive Drug Evaluation (COURAGE) Trial, researchers found that the imaging technique could help identify patients more likely to benefit from percutaneous coronary intervention than medical therapies alone.

The COURAGE trial (conducted between 1999 and 2004) studied 2,287 patients at 50 U.S. and Canadian centers, comparing clinical outcomes over a follow-up period ranging from 2.5 to 7 years.

In this substudy of the original trial, researchers used SPECT imaging to look at the hearts of 313 patients. The imaging was done on two groups of patients prior to and after treatment for coronary artery disease. One group received optimal medical therapy along with angioplasty; the other group received optimal medical therapy alone.

Researchers found no differences in rates of death, myocardial infarction, stroke or hospitalization for acute coronary syndromes between the patients who underwent procedures and those who only received medical therapy.

"Our outcomes in this substudy don't change the main COURAGE trial results," said Leslee J. Shaw, PhD, principal investigator of the nuclear substudy and a professor of medicine at Emory University in Atlanta, Ga. "It does clarify care for a certain subset of stable chest pain patients who have stress-induced ischemia prior to treatment. This group of patients benefited from percutaneous coronary intervention (PCI) and had a greater reduction in ischemia by one year. The main effect this could have on clinical practice is that patients with ischemia may be more often referred to PCI for ischemia resolution."

At baseline, the groups were similar, including anginal class, level of ischemia and the number of patients who had multiple-vessel disease. At follow-up imaging, treatment reduced ischemia by 2.7 percent in patients who received combination therapy; medical therapy alone was associated with a 0.5 percent reduction.

The images also showed that some patients had a very significant recovery of heart muscle (more than 5 percent); 33 percent of patients with combination therapy showed a reduction in ischemia of 5 percent or more, compared with 19 percent of patients who received medical therapy only.

Among patients who had reduced ischemia, nearly 80 percent in both treatment groups were free of angina. However, in patients who began the study with high-risk ischemia (those with greater than 10 percent of their myocardium compromised), combination treatment was more commonly effective in reducing ischemia than medical care alone.

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