

CT May Be Used to Assess Myocardial Ischemia

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WASHINGTON — Multidetector CT imaging using a rest/dipyridamole-induced stress protocol shows promise for the assessment of myocardial ischemia, on the basis of data presented at the annual meeting of the Society of Cardiovascular Computed Tomography.

Researchers compared rest-stress multidetector CT (MDCT) with stress-rest Tc

99m sestamibi SPECT (single-photon emission computed tomography) imaging to detect myocardial ischemia in 47 patients.

For ischemic regions, a reduction in contrast enhancement on MDCT during stress was 77% sensitive and 99% specific, compared with SPECT. A reduction in contrast enhancement at rest on MDCT identified scarred tissue with 96% sensitivity and 98% specificity, vs. SPECT.

“Our results show that dipyridamole stress-rest multidetector CT can evaluate

both myocardial ischemia induced by dipyridamole and coronary artery stenosis,” said Dr. Patricia Carrascosa of Diagnóstico Maipú in Buenos Aires.

Patients included in the study had an average age of 60 years; most were men (68%). Only 12 patients were symptomatic. All patients underwent rest-stress MDCT and stress-rest SPECT. A 17-segment model was used to assess myocardial ischemia. Based on the SPECT results, segments were classified as normal, ischemic,

or scarred. Normal segments appeared homogeneous. Ischemic segments had hypodense areas seen only on stress images. Scarred segments had hypodense areas visible on both rest and stress images.

In a subgroup of 20 patients, MDCT results were compared with the results of invasive coronary angiography. Significant stenosis was defined as stenosis of at least 50%. The sensitivity of MDCT, compared with that of invasive angiography, was 92% and the specificity was 97%. ■



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