Multisection CT Can Help in Surgical Strategy

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — Multisection CT imaging affected surgical management in 12 of 40 patients undergoing repeat coronary artery bypass grafting and provided helpful information on 30 patients with acute aortic dissection, Dr. Chris Probst said at the annual meeting of the International Society for Minimally Invasive Cardiothoracic Surgery.

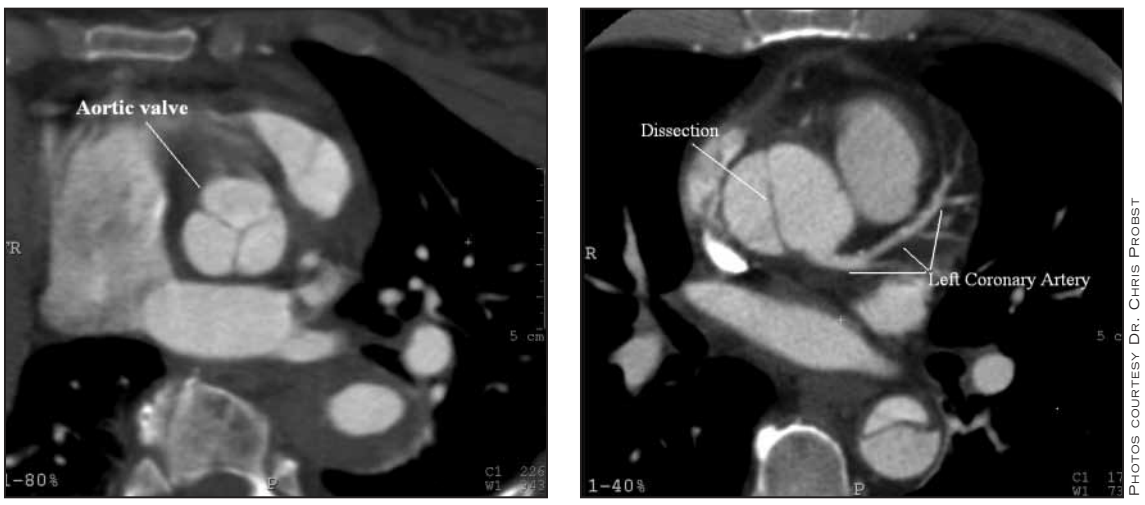
"In our clinic, we use it routinely for any patient" scheduled for reoperation after a previous coronary artery bypass graft (CABG), said Dr. Probst, of the department of cardiac surgery at the University of Bonn (Germany). "It is an excellent imaging modality for planning the optimal surgical strategy for reoperative patients, as well as for patients with aortic syndromes to prevent injury to the patient."

In the group referred for repeat CABG, 99% of all grafts could be visualized by multisection CT, including 34 arterial and 69 vein grafts. Of these, multisection CT allowed assessment of the complete anatomical course of 33 arterial grafts (97%) and 67 vein grafts (97%).

The imaging showed that 83 grafts were patent and 20 were occluded, he said. Among the patent grafts, 12 (14%) showed nonstenotic soft plaques.

Adherence of the right ventricle to the sternum was seen in 10 patients. Four patients showed adherence of the left internal mammary artery graft; another four patients showed adherence of the saphenous vein graft. Extensive calcifications of the ascending aorta were seen in three patients.

In the 30 patients with acute Stanford type A dissections, the investigators used multisection CT preoperatively to visualize the aortic valve and coronary tree, achieving good pictures of the aortic valve and the proximal and medium segments of the coronary tree. In one 64-year-old patient, for example, it clearly showed that the aortic valve was not involved in the dissection.



PHOTOS COURTESY DR. CHRIS PROBST

ECG-gated CT scans of a 64-year-old patient with type A dissection revealed that neither the aortic valve (left) nor the coronary arteries (right, showing left coronary artery) were involved in the dissection, thereby sparing the patient coronary catheterization that would have delayed surgery.

Multisection CT may be an important alternative to catheter angiography, which can delay urgent surgery and may only partially provide the sophisticated preoperative evaluation needed for safe surgery, Dr. Probst said. Evaluation of the thoracic aorta, coronary arteries, and grafts, as well as the anatomical relationships of cardiac structures, informs the surgical management of these two groups of patients.

Dr. Probst has no financial relationships with companies that make multisection CT machines. ■

64-Slice CT Could Rule Out Much Invasive Angiography

BY BRUCE JANCIN
Denver Bureau

CHICAGO — The use of 64-slice computed tomography coronary angiography seems to render invasive angiography unnecessary in many intermediate-risk patients, Dr. Mark A. Peterman reported at the annual meeting of the Society for Cardiovascular Angiography and Interventions.

Dr. Peterman observed the first 100 consecutive patients referred for 64-slice CT angiography for the indications of chest pain or an abnormal stress test following the installation of the imaging system at Baylor University Medical Center, Dallas.

Of those referred patients, 85 were reclassified as low risk on the basis of normal CT scans in the curved reformat, maximum-intensity pixel, and 3-D reconstruction views, said Dr. Peterman, of the university.

During 6 months of follow-up, there have been no coronary events in this group.

In the remaining 15 patients, whose CT findings were abnormal or suspicious, invasive coronary angiography was ordered by their primary cardiologists a mean of 20 days after CT angiography. The correlation between CT and conventional angiography proved to be excellent.

Thus, CT coronary angiography could obviate the need for invasive angiography in a significant number of intermediate-risk patients, although the real-world experience documented in this study requires confirmation in a larger, controlled study with longer follow-up. A cost-effectiveness analysis would be a useful component of any such study, Dr. Peterman added. ■