July 4, 2000

Instructions to Authors for Circulation have been revised. The revised instructions were first published Online in the March 14, 2000 issue and in print in the April 4, 2000 issue. Please follow the revised instructions when submitting a manuscript to Circulation.

James T. Willerson, MD,
Editor-in-Chief

Cardiovascular News

Meeting Highlights
Highlights of the 72nd Scientific Sessions of the American Heart Association

James J. Ferguson, MD

(Circulation. 2000;102:e1–e5.)

Clinical Investigation and Reports

Coronary Artery Fly-Through Using Electron Beam Computed Tomography

Peter M.A. van Ooijen, MSc; Matthijs Oudkerk, MD, PhD; Robert J.M. van Geuns, MD; Benno J. Rensing, MD, PhD; Pim J. de Feyter, MD, PhD

Background—Virtual reality techniques have recently been introduced into clinical medicine. This study examines the possibility of coronary artery fly-through using a dataset obtained by noninvasive coronary angiography with contrast-enhanced electron-beam computed tomography.

Methods and Results—Ten patients were examined, and 40 to 60 transaxial tomograms (thickness, 1.5 mm; in-plane pixel dimensions, ~0.5×0.5 mm) were obtained after intravenous contrast injection. The datasets were processed on a graphics workstation using volume-rendering software. For fly-throughs, the contrast-enhanced lumen was made transparent and other tissue was made opaque. Then, key frames were selected in a path through the vessel, with software interpolation of frames between key frames. A typical movie contained 150 to 300 frames (10 to 15 key frames). Fly-throughs of coronary bypass grafts (n=3), left anterior descending arteries (LAD; n=6), and the intermediate branch (n=1) were reconstructed. Coronary calcifications were seen in 3 patients. The fly-through of the intermediate branch, the bypass grafts, and one of the LADs did not show any irregularities. In 2 cases, a stenosis was visible in the LAD; its presence was confirmed by conventional coronary angiography.

Conclusions—Recent developments in fast-volume rendering using special-purpose hardware in combination with noninvasive coronary angiography with electron beam computed tomography have provided the possibility of performing coronary artery fly-throughs.

(Circulation. 2000;102:e6–e10.)

Images in Cardiovascular Medicine

Pheochromocytoma-Induced Cardiomyopathy

Vamsi K. Mootha, MD; Jeremy Feldman, MD; Finn Mannting, MD; Gayle L. Winters, MD; Wendy Johnson, MD

(Circulation. 2000;102:e11–e13.)