A 50-year-old man with angina pectoris was hospitalized for coronary angiography. He was diagnosed with angina pectoris from the typical symptom (angina on exercise), positive exercise ECG (depressed ST-T in leads I, aVL, and V_1 through V_3), and positive exercise \textsuperscript{201}Tl single photon emission CT (decreased \textsuperscript{201}Tl perfusion in anteroseptal wall on exercise and significant redistribution on the 4-hour delayed scan). The coronary angiogram (CAG) depicted left anterior descending coronary artery (LAD) stenoses (75% stenosis in segment 6 and 50% stenosis in segment 7, Figure). Plain CT depicts no calcification of the LAD, and contrast-enhancement CT depicts LAD stenoses concordant with the CAG (Figure). To demonstrate coronary arteries, we used 3-mm-thick, 2-mm-per-rotation table speed (0.8 second per rotation), and 0.1 pitch overlapping reconstruction. Because a half-scan helical reconstruction algorithm was applied, time resolution (full width–half maximal) to obtain one transaxial slice was 0.4 second. This protocol allowed clear images of the coronary artery with less motion artifact. Clear images were obtained mainly in the end-diastolic and end-systolic phases. This image (quality and resolution) supports the potential use of subsecond spiral CT in the evaluation of coronary artery disease.

Figure 1. CAG (left) and plain and contrast-enhancement CT (middle and right, respectively) of 50-year-old man with angina pectoris. Coronary angiogram depicts LAD stenoses (75% stenosis in segment 6 [arrow] and 50% stenosis in segment 7 [arrowhead]). Plain CT depicts left coronary arteries, and no calcification is observed. Contrast-enhancement CT depicts LAD stenoses concordant with CAG.
LAD Stenosis Detected by Subsecond Spiral CT
Teruhito Mochizuki, Kenya Murase, Yasushi Koyama, Hiroshi Higashino and Junpei Ikezoe

Circulation. 1999;99:1523
doi: 10.1161/01.CIR.99.11.1523

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1999 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://circ.ahajournals.org/content/99/11/1523

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/