A 46-year-old man had an acute inferior myocardial infarction after physical exercise. There was no evidence of heart failure. The ECG showed a 3-mm ST-T segment elevation with Q waves in leads D2, D3, and VF and a 3-mm depression in leads V2 to V4. Immediate coronary angiography evidenced a tight stenosis with distal slow flow that was located in the right coronary artery. Percutaneous transluminal coronary angioplasty, with implantation of 2 stents, was successfully performed. A normal flow was restored. Post-procedure ECG showed an isoelectric ST-T segment in leads D2, D3, and VF. Maximal creatine kinase elevation was 500 IU at 12 hours after the onset of clinical symptoms. Subsequent cardiac auscultation uncovered a loud holosystolic murmur. Color-coded Doppler echocardiography demonstrated a ventricular septal defect with a left to right shunt.

A multirow-detector computed tomography (CT, Volume Zoom, Siemens) scan procedure was performed with 4 iodine-enhanced, ECG-triggered, 1-mm slice acquisitions. Rotation time was 500 ms, accounting for a total breath-hold of 37 seconds. Diastolic gated and 3D reconstructions were performed at 70% RR intervals, with 0.6 mm increments of reconstruction. Three-dimensional reconstructions with volume rendering showed both complex posterior ventricular septal rupture (Figure 1) and contiguous unsuspected pseudoaneurysm of the posteroinferior wall of the left ventricle (Figure 2).

A biventricular endocardial patch was used for surgical repair with infarct exclusion. Recovery was uneventful. A postoperative CT scan showed that there was no residual septal defect or left ventricular aneurysm.
Figure 2. Coronal view in the plane of the aorta (Ao) showing a contiguous pseudoaneurysm (An) of the inferior septal segment of the left ventricle (LV). RV indicates right ventricle.
Multirow Detector Computed Tomography Assessment of Intraseptal Dissection and Ventricular Pseudoaneurysm in Postinfarction Ventricular Septal Defect

Jean-François Paul, Loïc Macé, Christophe Caussin, Abdelhamid Fsihi, Xavier Berthaux, Philippe Brenot and Claude Angel

_Circulation_. 2001;104:497-498
doi: 10.1161/hc2901.093313

_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2001 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/104/4/497

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/