



## New-Onset Angina Pectoris due to Coronary Artery Aneurysms

David Rott MD, Alexander Pecker MD, Benjamin Mazouz MD and Shmuel Banai MD

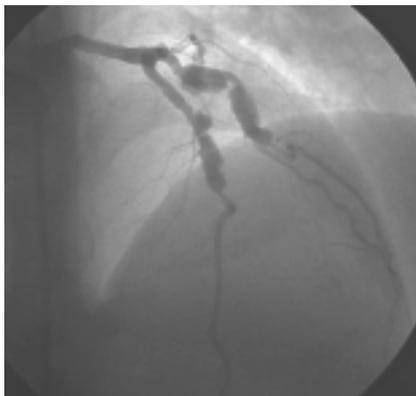
Department of Cardiology, Bikur Cholim Hospital, Jerusalem, Israel

**Key words:** angina pectoris, coronary, aneurysm

IMAJ 2003;5:603

A 38 year old man was admitted due to episodes of chest pain on exertion that he began to experience a few days earlier. His past medical history was unremarkable. A routine medical check-up 2 years previously, including an exercise stress test, was normal. His risk factor profile included: heavy smoking (30 pack/years) hypercholesterolemia (total cholesterol 230 mg/dl, low density lipoprotein 166 mg/dl, high density lipoprotein 40 mg/dl, triglycerides 120 mg/dl) Physical examination was unremarkable. Serial electrocardiograms revealed no abnormalities, and serial cardiac enzymes and troponin I tests were within normal limits. On the second hospital day an exercise stress test was positive for ischemia. Coronary angiography demonstrated coronary artery aneurysms associated with significant coronary stenoses involving the proximal and middle segments of the left anterior descending, first diagonal [Figure 1] and right coronary artery [Figure 2]. The left circumflex artery image was compatible with chronic occlusion [Figure 1]. The patient was referred to the cardiothoracic surgery service for coronary artery bypass grafting.

Coronary artery aneurysm is a rare disorder. About 50% of coronary artery aneurysms are due to coronary atherosclerosis [1]; another important etiology is Kawasaki disease [2]. Few reports describe iatrogenic aneurysm formation due to percutaneous coronary intervention [3] and brachytherapy [4]. Coronary artery aneurysm is usually diagnosed incidentally by coronary angiography; occasionally how-



**Figure 1.** Right anterior oblique cranial view of the left coronary artery showing aneurysms in the left anterior descending and first diagonal arteries, as well as chronic occlusion of the left circumflex artery.



**Figure 2.** Left anterior oblique cranial view of the right coronary artery showing aneurysm and severe stenosis.

ever, it may lead to acute coronary syndromes [5,6], or even rupture [7]. New stent designs hold promise for percutaneous sealing of a coronary aneurysm [8].

### References

- 1 Gersh BJ, Braunwald E, Bonow RO. Catheterization, angiography, and coronary arteriography. In: Braunwald E, Zipes DP, Libby P, eds. Heart Disease. A Text Book of Cardiovascular Medicine. 6th edn. Philadelphia: WB Saunders, 2001:1281-2.
- 2 Dajani AS, Taubert KA, Gerber MA, et al. Diagnosis and therapy of Kawasaki disease in children. *Circulation* 1993;87:1776-80.
- 3 Bertrand OF, Mongrain R, Soualmi L, et al. Development of coronary aneurysm after cutting balloon angioplasty: assessment by intracoronary ultrasound. *Cathet Cardiovasc Diagn* 1998;44:449-52.
- 4 Bertrand OF, Meerkin D, Bonan R. Coronary aneurysm after endovascular brachytherapy: true or false? *Circulation* 2000;102:E121.
- 5 Shiraishi J, Sawada T, Tatsumi T, Azuma A, Nakagawa M. Acute myocardial infarction due to a regressed giant coronary aneurysm as possible sequela of Kawasaki disease. *J Invas Cardiol* 2001;13:569-72.
- 6 Erdol C, Celik S, Baykan M, Gokce M, Karahan B, Bayram A. A coronary aneurysm complicated by acute myocardial infarction. A case report. *J Cardiovasc Surg* 2001;42:65-7.
- 7 Satoda M, Tatsukawa H, Kato S. Images in cardiovascular medicine. Sudden death due to rupture of coronary aneurysm in a 26-year-old man. *Circulation* 1998;97(7):705-6.
- 8 Urban P, Bednarkiewicz M, Bruscheweiler I, Frangos A. Percutaneous sealing of a coronary aneurysm. *Circulation* 1999;99:973-4.

**Correspondence:** Dr. D. Rott, Dept. of Cardiology, Bikur Cholim Hospital, 5 Strauss Street, Jerusalem 91004, Israel.  
Phone: (972-2) 646-4274  
Fax: (972-8) 973-2388  
email: drott@012.net.il