A 68-year-old man with no active cardiac symptoms was seen in our outpatient center for a second opinion after having undergone 4 percutaneous revascularization procedures in the previous 5 months at an outside hospital. Five years before this visit, the patient had undergone a routine treadmill exercise test that showed changes suggestive of coronary artery disease. Although he was asymptomatic and active, a cardiac catheterization was performed, which demonstrated “50% to 60%” obstructions. He was treated with a low-fat diet, simvastatin, amlodipine, and atenolol. He did not receive antiplatelet therapy.

Four months before the second opinion, the patient had undergone a second thallium stress test for follow-up. The study was suggestive of mild inferoposterior ischemia, and the patient again underwent diagnostic coronary angiography. The arteriogram was reported to be notable for hemodynamically significant lesions in the proximal left anterior descending coronary artery (LAD) (Figure, A), in the circumflex coronary artery (LCx) (B), and in the origin of a posterolateral branch of the right coronary artery (C). At the time of the diagnostic coronary angiography, balloon angioplasty was performed on the LAD stenosis (D). Approximately 1 week later, angioplasty was performed on the LCx and posterolateral coronary arteries, with a stent being placed in the LCx.

Two months after the second procedure, the patient became symptomatic for the first time and was hospitalized because of substernal chest pain occurring with minimal exertion. After stabilization with intravenous heparin, aspirin, and nitrates, a coronary angiogram was obtained that demonstrated a high-grade stenosis of the proximal LAD with thrombus (E). Repeat balloon angioplasty was performed with placement of a stent. Persistent restenosis was also evident in the LCx; however, this was not believed to be the culprit lesion and was not approached because of a dissection distal to the LAD stent.

Approximately 1 month after this third procedure, the patient again experienced crescendo angina, with the development of intermittent rest pain. He was hospitalized on an emergency basis for repeat coronary angiography, which revealed a high-grade stenosis of the LCx (F). Balloon angioplasty accompanied by stent placement was again performed. After the patient had been evaluated and previous films reviewed, he was advised by our center to pursue surgical revascularization if and when symptoms recurred. Within several months of his visit, his exertional angina returned, and he underwent coronary artery bypass graft surgery.

This case is an example of the “oculostenotic reflex” as defined by Topol and Nissen and raises several important points: (1) The only legitimate reasons for revascularization are to relieve symptoms and/or to prolong life; (2) the presence of coronary disease should not mandate intervention in the absence of significant stenosis and demonstrable ischemia in that distribution; and (3) in patients with multivessel disease and aggressive multivessel restenosis, early surgical revascularization is probably more cost-effective than repeated percutaneous interventions. Because asymptomatic patients with minimal to moderate disease can be treated medically with low morbidity and mortality, this case also represents what can be done versus what should be done in patients with coronary atherosclerosis.

Reference

Oculostenotic Reflex and Iatrogenosis Fulminans
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Circulation. 2000;101:e198-e199
doi: 10.1161/01.CIR.101.20.e198

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