sage and cardiopulmonary resuscitation were in progress. She was put on cardiopulmonary bypass through a groin incision and femoral cannulation; then a 2nd venous cannula was inserted after the chest was opened, and a single saphenous vein graft was performed. The cross-clamp time was 15 minutes, and the total elapsed revascularization time was well under an hour. The patient had a smooth postoperative recovery and left the hospital after 1 week, without any complications.

I recommend the routine use of the saphenous vein under circumstances such as that mentioned by the authors. The idea is to cut the ischemic time and thereby prevent infarction and pump failure. The internal mammary can be used at any time in the future, should a 2nd operation be required.

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Chronic Total Occlusion of the Left Main Coronary Artery

To the Editor:

This is in reference to the article "Emergency Surgical Treatment for Total Left Main Coronary Artery Occlusion," which recently appeared in your journal (1993:20:55-9). It was to the effect that treatment of total left main coronary artery occlusion is rarely reported in the world medical literature and that, to the authors' knowledge, there had been no previous report of successful surgical revascularization in an acute case.

In editorial comment, Virendra Mathur observed that if obstruction occurs chronically, allowing time for collateral flow channels to develop, survival after total occlusion is possible. In fact, in 5,312 consecutive patients undergoing cardiac catheterization studies in the Clayton Cardiovascular Laboratory at the Texas Heart Institute, 7 patients were found to have total obstruction of the left main coronary artery with the entire myocardial blood flow coming from the right coronary artery and its branches collateral to the left main coronary artery. All of these patients improved dramatically after surgical revascularization. Since I myself have experienced chronic total occlusion of the left main coronary artery, I thought your readers might be interested in a personal account of my similar case.

From 1989 through 1991, I experienced some exercise intolerance, shortness of breath, angina, and a positive exercise tolerance test. However, I was doing quite well under medical treatment with a beta blocker (atenolol), until an acute gastrointestinal hemorrhage from a diverticulum precipitated both cardiac and renal failure. Electrocardiograms indicated a new septal infarct pattern, as well as anterolateral T wave inversions. Thallium imaging was remarkable in that it showed a large reversible defect involving the anterior wall and apex.

On 12 September 1991, right and left cardiac catheterization and selective coronary arteriography were performed. These demonstrated a total left main coronary artery occlusion at the ostium. The right coronary was a large-caliber, dominant vessel giving rise to a posterior descending artery as well as to ventricular branches. In the proximal third of the right coronary, there was an eccentric 50 to 60% narrowing, and in the mid-vessel a 30 to 40% narrowing. The distal vessel was large in caliber and without significant disease. There was collateral filling of the entire left anterior descending and of the diagonal branches coming off the posterior descending artery. The very proximal circumflex artery, just after its origin, contained a 90% discrete stenosis. There was an additional area of 60% narrowing in the mid-circumflex. Echocardiography showed left ventricular function to be relatively well preserved, with evidence of only mild anterior and apical hypokinesia. Revascularization was recommended.

Multiple-vessel coronary artery bypass surgery was performed on 13 September. Postoperative hemorrhage required mediastinal exploration the next day: a mediastinal hematoma was evacuated, and bleeding at the site of a previously repaired innominate vein was stopped. The postoperative course was difficult, characterized by slow recovery and the development of end-stage renal insufficiency that required dialysis 3 times weekly.

About 1 ½ years later, on 24 February 1993, an echocardiogram revealed a non-dilated left ventricle with mild concentric hypertrophy and moderate left ventricular systolic dysfunction with hypokinesia involving the anterior septum and apex. The ejection fraction was estimated at 40%.

At the present time (24 April 1993), there is no heart failure, angina, nor cardiac arrhythmia, and no evidence of myocardial infarction more recent than that which preceded surgery. Exercise tolerance is reasonably good for an 80-year-old man. Of course, renal failure persists and dialysis continues to be necessary.

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