A 65-year-old man with diabetes and arterial hypertension was operated on in 2004 for triple coronary artery bypass of the left anterior descending artery with a left internal mammary artery (LIMA) graft and of the right and circumflex coronary arteries with saphenous vein grafts. In July 2010, he presented with typical angina pectoris at rest exacerbated by selective exercise of the left upper limb. Physical examination was notable for blood pressures of 150/70 mmHg in the right arm and 80/60 mmHg in the left arm, with weak brachial and radial pulses on the left side. The electrocardiogram revealed myocardial ischemia of the anterior territory whilst cardiac enzymes were within normal limits. Cardiac catheterization showed patent saphenous vein grafts, the LIMA graft with a small-caliber distal vessel, and some nonsignificant lesions. Angiography of the left coronary artery showed the entire LIMA graft (Fig. A) with a reversed contrast flow into the subclavian artery. The left subclavian artery could not be visualized by aortography. Contrast-enhanced multidetector computed tomography scanning revealed total occlusion of the left subclavian artery (Fig. B) and its filling by the LIMA (Fig. C). Percutaneous revascularization could not be performed due to technical problems (total occlusion and inability to pass the guide wire) and probable complications. It was thus decided to opt for bypass surgery.

Figures. (A) Frame-by-frame demonstration of filling of the left subclavian artery by the left internal mammary artery (LIMA) graft during left coronary angiography. (B) Total occlusion of the left subclavian artery on computed tomography angiogram. (C) Filling of the left subclavian artery by the LIMA.