Bilateral coronary artery to pulmonary artery fistulas associated with significant coronary artery atherosclerosis

A 62-year-old man was admitted to our emergency room with chest pain typical in character. He had chest pain on exercise for a long time, but within the past several days, his chest pain also appeared at rest with addition of syncope attacks. He was a smoker. On auscultation, a systolic parasternal murmur was elicited. Other physical examination findings were normal. Electrocardiography showed a possible anterior ischemia. Echocardiography showed mild dilatation of the left ventricle with anterior and apical wall hypokinesia. Coronary angiography demonstrated bilateral coronary artery fistulas arising from the left anterior descending artery (LAD) and right coronary artery (RCA) to the pulmonary artery with coronary steal (Fig. A, B). There was a critical atheromatous stenosis of the LAD and atheromatous lesions of the RCA distal to the fistula. At coronary artery bypass surgery, fistulas and atherosclerotic lesions were confirmed under direct visualization (Fig. C), and fistulas were ligated in addition to left internal mammary artery and saphenous vein bypass grafting. The postoperative course was uneventful.

Figures. (A) Selective left coronary arteriography in the right anterior caudal projection showing a fistulous tract between the left anterior descending (LAD) artery and pulmonary artery and a severe obstructive lesion of the LAD. (B) Selective right coronary arteriography in the left anterior oblique projection showing a fistulous tract between the right coronary artery (RCA) and pulmonary artery and atherosclerotic lesions. (C) Perioperative appearance of the fistula.