Surgical management of multiple coronary artery aneurysms, including the giant form

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Coronary artery aneurysms are clinically relevant, because thromboembolism, rupture, and hemodynamic problems related to compression may occur. Surgical management is not standardized, and an individual approach toward each aneurysm is prudent. Giant coronary artery aneurysms (larger than 20 mm in diameter) originate in different ways and are extremely rare, and their surgical treatment is also not well defined. Herein, we report the case of a 63-year-old man who had 2 aneurysms of the circumflex coronary artery and a 65-mm aneurysm of the right coronary artery. The diagnosis was established by use of transesophageal echocardiography, magnetic resonance imaging, and coronary angiography. An intraoperatively discovered smaller aneurysm of the right coronary artery was ligated. The giant thrombus-filled aneurysm of the right coronary artery was partially resected, because it compressed the right atrium and ventricle. A graft of the greater saphenous vein was constructed to the distal right coronary artery. The smaller, noncompressing aneurysms in the circumflex coronary artery were excluded by means of proximal and distal suture ligation, and bypass grafting was performed with use of skeletonized left internal mammary artery. The procedures were successful. We discuss the reasons behind our individual approach toward our patient's aneurysms.

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