A 53-year-old man presented with acute retrosternal chest pain and electrocardiographic changes sufficient to warrant thrombolysis with tissue plasminogen activator (TPA). When he developed pulmonary edema and signs of severe aortic regurgitation, a clinical diagnosis of acute aortic dissection was considered. Transesophageal echocardiography ruled this out but showed aortic root dilatation with free aortic regurgitation. Left ventricular enlargement suggested a chronic process. A spiral computer tomographic (CT) scan confirmed the echocardiographic findings (Figure 1). Emergency surgery was performed after measures to reverse the effects of thrombolysis. The findings provided an explanation for the ischemic pain. The right coronary artery originated posteriorly from the left coronary sinus (type 2A) and took an intramural course around the 10 cm root aneurysm (Figure 2). Aortic root replacement was performed with mobilization and reimplantation of the coronary ostia. Because of the anomalous origin and slit-like intramural course, the right coronary artery was reimplanted higher and more posteriorly than normal on the Dacron graft. The postoperative course was uneventful. Histopathologic examination of the aortic wall showed cystic medial necrosis.

Reference

Ischemic Pain in Aortic Regurgitation
Satoshi Saito, Madhava J. Naik and Stephen Westaby

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