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Images in Cardiology: Variant Angina with Recurrent Ventricular Tachycardia Successfully Treated by Stent Implantation of a Moderate Ostial Lesion of the Right Coronary Artery

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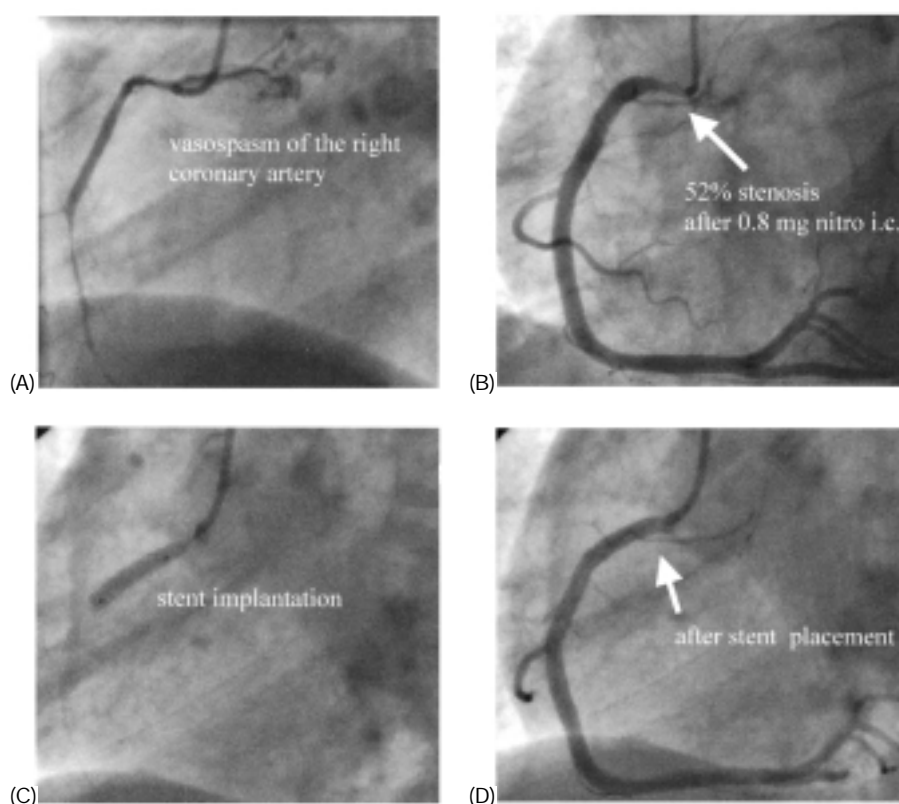


FIG. 1 (A) Severe vasospasm of the right coronary artery (RCA). (B) Intracoronary (i.c.) injection of 0.8 mg nitroglycerin into the RCA results in TIMI III flow and unmasks an ostial lesion. (C) Direct implantation of a 13-mm stent. (D) Final angiographic result.

A 41-year-old woman with a history of severe cigarette smoking complained of recurrent angina pectoris and palpitations that began in 1997. In the course of an uncomplicated ST-elevation inferior myocardial infarction 6 years ago, coronary angiography showed no stenosis of the epicardial vessels but revealed a catheter-induced vasospasm of the right coronary artery (RCA). At that time the echocardiogram and biplane ventriculography documented normal systolic left ventricular

(LV) function. Following more frequently severe and prolonged episodes of angina pectoris and paroxysmal episodes of nonsustained ventricular tachycardia, the patient underwent repeat left heart catheterization in August 2003. At reevaluation, hypokinesia of the inferior LV wall was found and a severe vasospasm of the RCA occurred (Fig. 1A), associated with a 0.5 mV ST-segment elevation in the inferior leads (Fig. 2A) and severe angina pectoris. After administration of nitro-

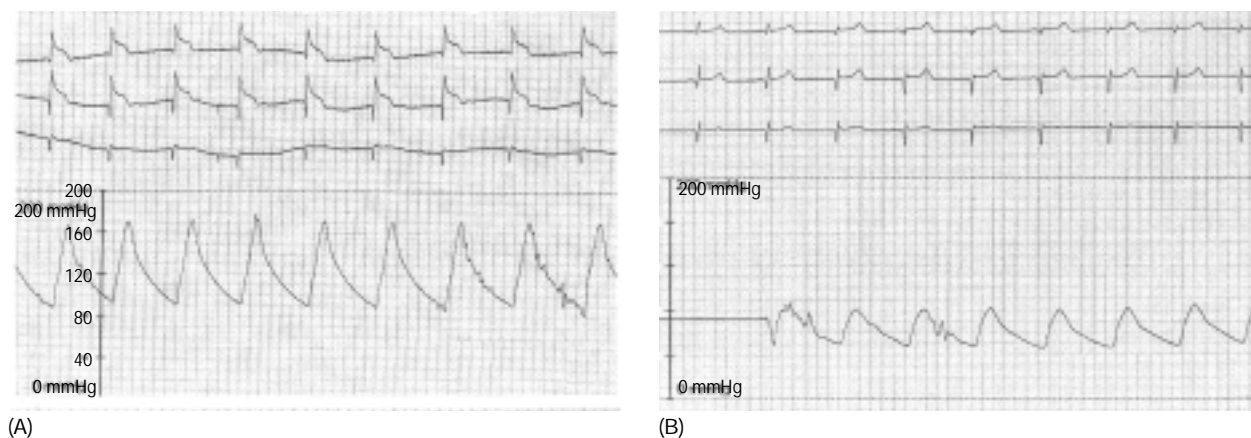


FIG. 2 (A) ST-segment elevation after contrast-dye injection with subsequent vasospasm of the RCA. (B) Normalization of ST-segment elevation after i.c. administration of nitroglycerin.

glycerin at a total dose of 0.8 mg into the RCA, the vasospasm disappeared, ST-segment elevation resolved (Fig. 2B), and an ostial lesion (52% diameter stenosis by quantitative angiography) was unmasked (Fig. 1B) and treated by subsequent stent

implantation (Fig. 1C, 1D). A defibrillator was implanted for prophylaxis of malignant ventricular arrhythmias. The patient was discharged 6 days after the interventional procedure and remained asymptomatic for 12 months.

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Images in Cardiology: Quadricuspid Aortic Valve: A Rare Entity

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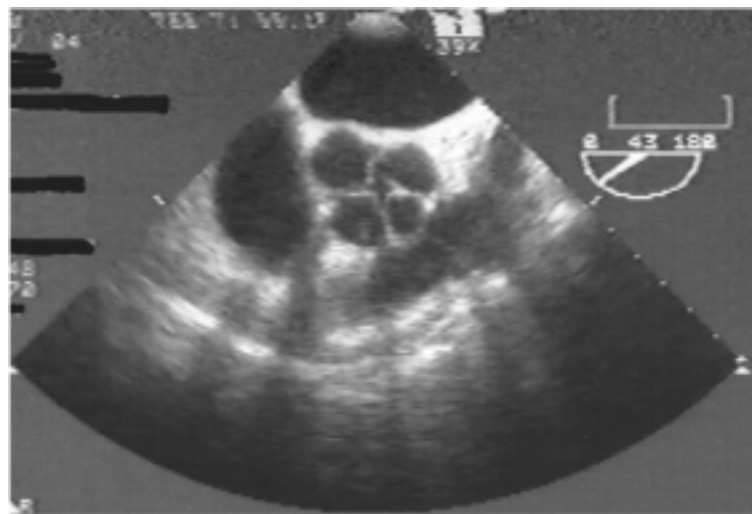


FIG. 1 Short-axis view of the aortic valve on transesophageal echocardiography.

A 49-year-old woman presented with a three-month history of progressively worsening exertional dyspnea and a diastolic murmur on examination. Transesophageal echocardiography revealed the presence of a quadricuspid aortic valve with severe aortic insufficiency.

Quadricuspid aortic valve is a very rare congenital anomaly that generally occurs in isolation. Patients rarely present with severe aortic insufficiency until the fifth or sixth decade of life. Associated anomalous origin of coronary arteries should be ruled out, especially if surgical treatment is contemplated.

Reference

Timperley J, Milner R, Marshall AJ, Gilbert TJ: Quadricuspid aortic valves. *Clin Cardiol* 2002;25: 548-552