Double-chambered right ventricle associated with membranous interventricular septal aneurysm

Ozcan Ozeke*, Onur Sahin, Omac Tufekcioglu, Dursun Aras, Bilal Geyik

Yuksek Ihtisas Hospital, Department of Cardiology, Ankara, Turkey

Received 29 May 2004; received in revised form 16 July 2004; accepted 23 July 2004

KEYWORDS
Double-chambered right ventricle; Membranous interventricular septal aneurysm

A 16-year-old boy was referred to our cardiology clinic for investigation of his heart murmur. He had mild exertional dyspnea. On physical examination, the patient appeared well and nondysmorphic. General physical examination showed no abnormalities except a grade 2/6 pansystolic murmur near the right sternal border. Laboratory findings were within normal limits and chest radiography showed mild cardiac enlargement. The ECG showed normal sinus rhythm. Transthoracic echocardiography in the apical four-chamber view revealed an anomalous muscular bundle dividing the right ventricle (RV) into two different compartments and an aneurysm of the membranous interventricular septum, which was mobile and had a to-and-fro motion between the two ventricles in relation to the different phases of the cardiac cycle: a prominent systolic bulging of the interventricular septum toward the RV (Fig. 1) and diastolic bulging toward the left ventricle. Parasternal view also showed the anomalous muscular bundle connected with RV outflow tract (Fig. 2). No evidence of left-to-right shunt was detected with Doppler echocardiography. Because the patient was relatively asymptomatic and there was no significant intraventricular gradient, we decided on conservative treatment and follow-up.

* Corresponding author. Tel.: +90 312 3632761.
E-mail address: ozcanozeke@hotmail.com (O. Ozeke).

1525-2167/$30
Figure 1  Two dimensional echocardiography in the four-chamber view shows the anomalous muscular bundle (arrow) within the right ventricle and a bag-shaped echo in the interventricular septal bulging (arrowhead) toward the right ventricle in systole. LV, left ventricle; LA, left atrium; RV, right ventricle; RA, right atrium.

Figure 2  Two dimensional echocardiography in the parasternal view shows the anomalous muscular bundle (arrow) connected with right ventricle outflow tract. LA, left atrium; RV, right ventricle; RA, right atrium; PA, pulmonary artery; Ao, aorta.