A 57-year-old male patient with paroxysmal atrioventricular nodal reentrant tachycardia (AVNRT) was admitted to a cardiac ward on a regular basis for ablation procedure. The patient’s history revealed fast heart rate episodes for several years, arterial hypertension treated for five years, hyperlipidemia and peptic ulcer disease. Physical examination showed a regular heart rate of 70bpm, quiet systolic murmur over the mitral valve and normal breath sounds. Resting ECG showed no abnormalities. A routine transthoracic echocardiography revealed concentric left ventricular wall thickening and moderate mitral valve regurgitation. Special attention was paid to an untypical accessory structure detected in the left atrium area (Figure 1). Transthoracic echocardiography was performed in order to expand the diagnostic process. The investigation showed the vessel directly adjacent to the left atrium. The doppler examination showed flow inside the structure, yet without a visible connection with the left atrial cavity (Figure 2). A congenital venous anomaly was suspected in the form of persistent left superior vena cava. X-ray fluoroscopy was done to confirm the type of the anomaly. Administration of contrast into the peripheral vein of the left superior limb resulted in visualization of the investigated structure followed by visualization of the coronary sinus. Electrophysiological examination was done due to AVNRT previously documented in ambulatory ECG investigations. Programmed atrial stimulation repetitively induced nodal reentrant tachycardia with a ventricular rate of 140bpm. Radiofrequency ablation of slow pathway modified the conduction and caused a lack of inducibility of the tachycardia in control programmed stimulation.

Persistent left superior vena cava (PLSVC) is a rarely occurring congenital anomaly with the incidence of 0.3% in general population. This anomaly results from the persistence of the left anterior cardinal vein. In 90% of cases blood from PLSVC flows into the coronary sinus and then to the right atrium. It may complicate the placement of central vein catheters in the jugular and subclavian veins and, as such, cardiologists should be aware of the existence of this anatomic variant. Here we describe an adult patient with persistence of the left superior vena cava identified during made echocardiography test in a 57-year-old male patient with paroxysmal atrioventricular nodal reentrant tachycardia (AVNRt) who was admitted to a cardiac ward on a regular basis for ablation procedure.

Key words: persistent left superior vena cava, atrioventricular nodal reentrant tachycardia.

Accepted September 21, 2015.
Revision received September 14, 2015.
Accepted September 21, 2015.

Russ J Cardiol 2016, 4 (132), Engl.: 202–203
http://dx.doi.org/10.15829/1560-4071-2016-4-eng-202-203

Key words: persistent left superior vena cava, atrioventricular nodal reentrant tachycardia.
defect, ventricular septal defect, aortic coarctation, transposition of the great vessels, tetralogy of Fallot, anomalous connections of the pulmonary veins or single atrium [1, 2, 3]. In 90% of cases blood from PLSVC flows into the coronary sinus and then to the right atrium. In the remaining 10% of cases, the PLSVC is directly connected to the left atrium. Superior vena cava mostly occurs in the hypoplastic form (82-90%) [1]. In the presented case, PLSVC coexisted with the anomaly in the heart conduction system — an accessory pathway in atrioventricular node causing AVNRT.

Summarizing, attention should be paid to this rare developmental anomaly due to a possible difficulty in superior vena cava access in the case of medical procedures and a possibility of the coexistence of other cardiac pathologies. In the presented case, PLSVC was accompanied by an accessory pathway in atrioventricular node.

**References**

