

Asymptomatic single atrium

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Introduction: Single atrium is a rare congenital heart defect characterized by absence of atrial septum with no endocardial cushion defect and it has similar hemodynamic features similar to large atrial septal defect. There are reports of dyspnea on exertion, decrease in exercise tolerance, and cyanosis during early childhood when malformation of atrioventricular valve is involved. **Case Report:** A 47 year old man was admitted to our hospital with a chief complaint of persistent palpitation. During childhood, he experienced mild transient cyanosis and dyspnea on exertion. Upon physical examination, there was mild digital clubbing, but labial cyanosis at rest was not observed. Wide splitting of S2 was heard upon cardiac auscultation and atrial fibrillation was detected in an electrocardiogram. Transthoracic echocardiogram was ordered and no sign of right ventricle dilatation, interatrial septum or cleft in mitral or tricuspid leaflet was detected. Bubble test was positive in additional transesophageal echocardiogram and no interatrial septum was noted. No atrioventricular valve malformation was observed but mild mitral and tricuspid regurgitation was noted. Cardiac CT showed dilated atrium and RV, and no interatrial septum. He is being observed with oral treatment for atrial fibrillation and surgery procedure is under consideration. Most patients with single atrium are diagnosed during early childhood as symptoms aggravate and treated surgically. This is a report of rare case of a patient with non-prominent symptoms until late adulthood.



Hypertrophic Cardiomyopathy Progression to Ischemic Cardiomyopathy-like Clinical Feature

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The patient was a 32-year-old man when he was first hospitalized as a result of electrocardiographic abnormality (ST depression in II, III and aVF). He was diagnosed concentric nonobstructive HCMP [ejection fraction (EF) 72%, septal thickness of left ventricular (LV) 19.7 mm, LV end diastolic/systolic volume (42.7/13.4 mL)]. His mother was diagnosed apical hypertrophy but there were no history of sudden death in the family members. The patient was re-hospitalized 7 years later as a result of syncope. Neurologic examination was normal findings. Echocardiographic findings were non-obstructive HCMP but decreased LV wall thickness (16 mm) and low-normal EF values (EF = 63.9%). The patient was re-hospitalized 9 years later as a result of atypical chest discomfort. Echocardiography revealed akinesis at basal to mid anteroseptal, basal to mid septal, basal to mid inferior and basal to mid anterior LV wall motion with decreased LV systolic function (EF = 45.5%) but normal chamber size (LV dimension diastole/systole 54.8/42.3 mm). Coronary angiography was performed but showed normal coronary artery. Cardiac magnetic resonance imaging (MRI) revealed multifocal transmural and subepicardial delayed enhancing areas at anteroseptal, septal and inferoseptal wall of LV and wall thinning and decreased wall motion of anteroseptal LV wall (Figure). Findings of ischemic CMP-like feature by echocardiography suggested microvascular dysfunction. And then this case was confirmed the end stage of HCMP with microvascular dysfunction by using cardiac MRI after a follow-up period of more than 16 years.

Figure. Cardiac magnetic resonance imaging.

