



Silent right atrial rupture detected by live three-dimensional echocardiography

Sağ atriyal rüptürün canlı üç-boyutlu ekokardiyografi ile gösterilmesi

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Right atrial dissection and rupture, unusual complications of a cardiac catheterization, occurred in 54 years old woman with atrial septal defect illustrated here by live three-dimensional transthoracic echocardiography. The patient was admitted to our hospital for evaluation of the interatrial septum for transcatheter device closure. She had underwent cardiac catheterization and coronary angiography two months ago. She had been complaining of well tolerated exertional dyspnea for three years. After the cardiac catheterization, she has had no any new complaint. Her blood test results were as following: red blood cell count was 11.9x10¹²/L, 11.0x10¹²/L and hematocrit was 38%, 37% before and after the cardiac catheterization, respectively. 2D-transthoracic echocardiography demonstrated minimal pericardial effusion, localized only behind the posterior

wall of the right atrium. Live 3D-transthoracic echocardiography detected the intrapericardial thrombi and its relation with the right atrial wall (Video 1. See corresponding video/movie images at www.anakarder.com). Transesophageal echocardiography detected the dissection at the right atrial wall and rupture, which was closed by the partially organized thrombi (Fig. 1, 2, Video 2. See corresponding video/movie images at www.anakarder.com). The patient underwent surgery for repair of atrial septal defect and atrial rupture. Live 3D transthoracic echocardiography may be a useful and noninvasive method for evaluation of pericardial effusion, which appears newly after cardiac catheterization.



Figure 1. Dissection in the right atrial wall (arrow head) and thrombus (arrow) with pericardial effusion demonstrated by transesophageal bicaval view

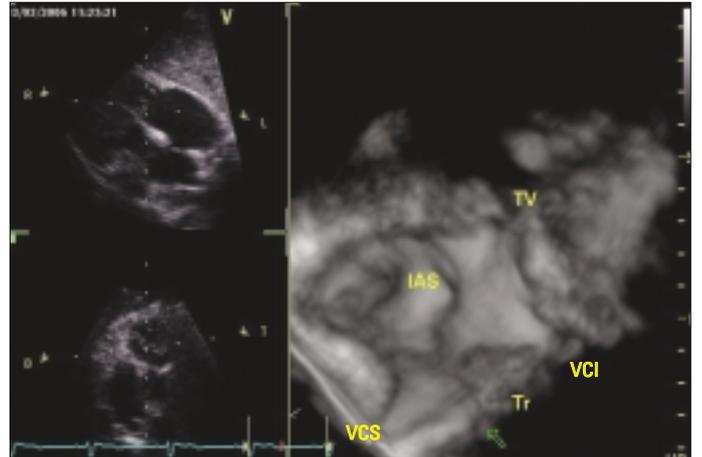


Figure 2. The rupture (arrow) of the right atrial wall occluded by thrombi demonstrated by 3D-transthoracic echocardiography. Atrial septal defect viewed "en face" from the right atrial aspects

IAS- interatrial septum, Tr- thrombus, TV- tricuspid valve, VCI- vena cava inferior, VCS- vena cava superior