A 50-year-old man who had undergone to aort valve replacement 10 years ago was admitted to our clinic with exertional dyspnea. Physical examination revealed an afebrile patient with a blood pressure of 138/84 mm Hg, regular pulse of 84/minute. An ejection systolic murmur (3/6 in intensity) was heard all over the precordium likely from the flow across his prosthesis. Electrocardiography showed nonspecific T wave changes in lead V1-V4. No evidence for clinical heart failure, anemia, jaundice or infection was noted. Laboratory tests revealed no leukocytosis and blood cultures were negative. C-reactive protein was 0.5 mg/L. (Normal: <0.8 mg/L) Erythrocyte sedimentation rate was normal with a 15 mm/hr. Transthoracic echocardiogram (TTE) in apical 5 chamber view revealed a cystic mass adjacent to the aortic valve in the left atrium that had a flow inside it (Fig. 1). Therefore transesophageal echocardiography (TEE) was performed. Midesophageal short-axis view (40 degree) showed a cystic mass inside the left atrium that had a communication with aorta (Fig. 2, Video 1). Midesophageal long-axis view (130 degree) demonstrated a multilobulated cystic structure (3.2 x 2.7 cm) with the communication between aorta and left ventricle (Fig. 3, Video 2, 3). This appearance was considered as an aorta-left ventricle fistula resulted from pseudoaneurysm after aortic valve replacement. The patient was referred to surgery and the operation was successful.
Demonstration of coronary artery fistula between the left circumflex coronary artery and right ventricle using echocardiography and multidetector CT

Coronary artery fistula (CAF) consists of a communication between a coronary artery and a cardiac chamber or pulmonary vessel. The incidence of CAF from the left circumflex coronary artery (LCX) is extremely rare.

A 24-year-old female patient admitted to our institution for evaluation of heart murmur etiology. She reported no chest pain or other symptoms. In the parasternal short-axis view at great arteries level, the left main coronary artery and the left circumflex artery was showed dilated by Transthoracic echocardiography (Fig. 1). In the parasternal short-axis view at ventricular level, Doppler echocardiography showed abnormal mosaic vascular structure flowing via the left atrioventricular groove toward inflow of right ventricle (RV) near tricuspid valve (white arrow). Continuous-wave Doppler echocardiography revealed a high-speed continuous jet with a peak velocity of 476 cm/s at the drainage site, equivalent to a peak pressure gradient of 91 mm Hg (Fig. 3). The abnormal mosaic vascular structure was considered as the tortuous dilated circumflex artery located in the left atrioventricular groove between the left atrium and left ventricle. Coronary computed tomography angiography showed that segments of the left main coronary artery and LCX was dilated, and LCX was very large and tortuous, traveling in the left atrioventricular groove between the left atrium and left ventricle by three-dimensional computed tomographic vol-