

Figure 1. (a) Transesophageal echocardiography showing a giant unruptured left sinus of Valsalva aneurysm, arrow. (b) Transesophageal echocardiography revealing the aneurysm compressing the left ventricle severely, arrow

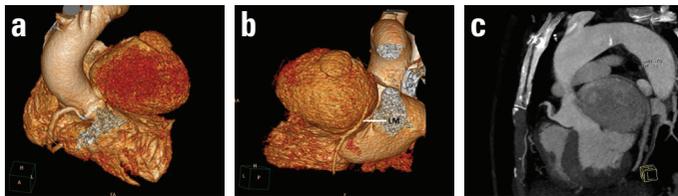


Figure 2. A 64-multidetector computed tomography angiogram. (a) The three-dimensional reconstruction demonstrating the entire aneurysm. (b) The three-dimensional reconstruction demonstrating the left main coronary artery and its bifurcation. (c) Sagittal view showing the giant aneurysm that compressed the outflow of left ventricle

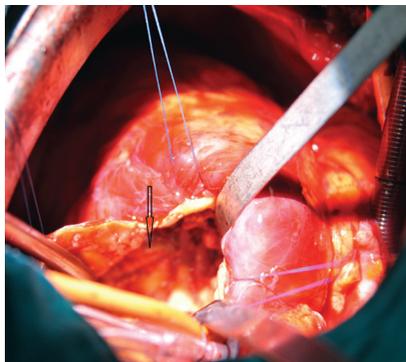


Figure 3. Intraoperative photograph demonstrating the intracavity of the aneurysm, arrow

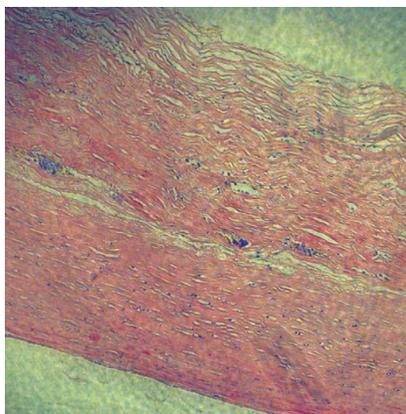


Figure 4. Microscopy (x50), hematoxylin and eosin stain

Video 1. Transesophageal echocardiography revealing a giant unruptured left sinus of Valsalva aneurysm.

Video 2. Transesophageal echocardiography revealing the aneurysm severely compressing the left ventricle.

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Aortic valve aneurysm involved in interventricular septum

A 39-year-old man with no relevant medical history presented to the outpatient department of our hospital with complaints of intermittent fever and exertional dyspnea since 2 months. On physical examination, a grade 3/6 diastolic murmur was heard. Blood cultures had persistently grown gram-positive enterococci. Two-dimensional transthoracic echocardiogram that was performed revealed a large aneurysm in the right coronary leaflet involving the basal septum (Fig. 1, Video 1) with severe aortic insufficiency and left ventricular chamber dilatation. Color Doppler echocardiography identified perforation of the aneurysm as a cause of aortic insufficiency and demonstrated diastolic aortic regurgitation from the perforation flowing into the left ventricular outflow tract (Fig. 2). Three-dimensional transesophageal echocardiography more clearly revealed the aneurysm with multiple perforations (Fig. 3, Video 2). After a regular antibiotic treatment, the patient's blood cultures were negative, and an operation was finally performed. The same findings were observed as described above.

Aortic valve aneurysms are rare. There are only a few studies reporting aortic valve aneurysms because of endocarditis. We used three-dimensional transesophageal echocardiography to examine an extremely rare large aneurysm that was involved in the interventricular septum with multiple perforations.

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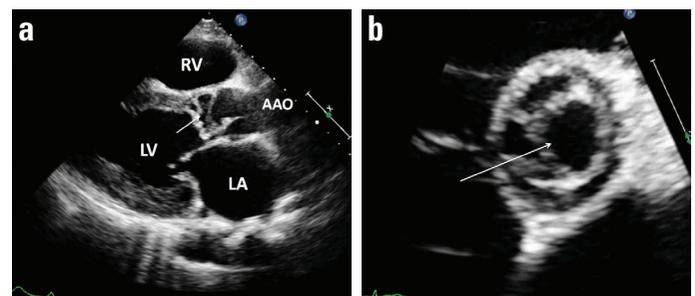


Figure 1. On two-dimensional transthoracic echocardiogram, arrow points to a large aneurysm in the right coronary leaflet involved in basal septum. AAO - ascending aorta; LA - left atrium; LV - left ventricle; RV - right ventricle

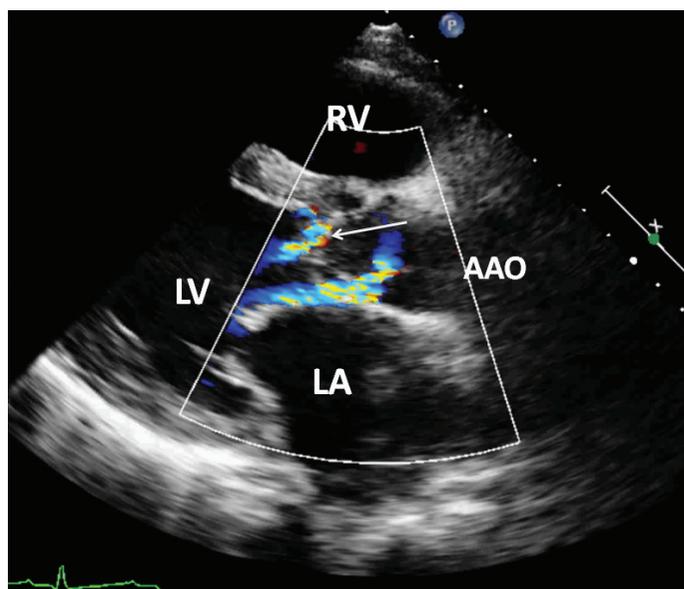


Figure 2. Color Doppler echocardiography showing perforation (arrow) of the aneurysm as a cause of aortic regurgitation. AAO - ascending aorta

Video 1. Two-dimensional transthoracic echocardiogram displayed the aortic valve aneurysm involved in basal septum.

Video 2. Three-dimensional transesophageal echocardiography showed the perforations on the aneurysm.

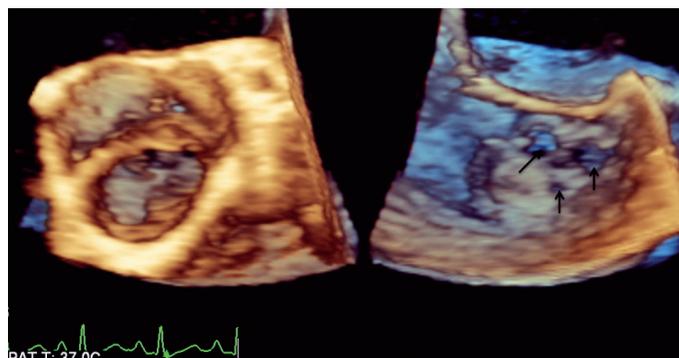


Figure 3. Three-dimensional transesophageal echocardiography demonstrated multiple perforations (black arrows) on the aneurysm

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