A 22-year-old male patient was admitted to our institution because of repeated chest pain and syncope. Physical examination was unremarkable except for a systolic murmur on cardiac auscultation. Transesophageal echocardiogram showed a large, very mobile cystic mass (21×17 mm) attaching to the bicuspid aortic valve, which caused severe left ventricular outflow tract obstruction with normal ventricular size and function (Figure 1A and 1B and Movies I and II in the online-only Data Supplement). Additional cardiac MRI revealed there was a cyst-like mass attached on the aortic valve (Figure 1C through 1E and Movie III in the online-only Data Supplement). Finally, a bluish blood-filled cyst (23×17 mm) originating from the bicuspid aortic valve with a broad base was confirmed during surgical operation (Figure 2A and 2B). Surgical resection of the cyst with concurrent aortic valve replacement was done for this patient. Additional histological examination confirmed that the cystic cavity was surrounded by a fibromyxoid wall with an internal lining of endothelial cells (Figure 2C). The patient was discharged uneventfully 7 days after surgery.

Cardiac cyst originated from bicuspid aortic valve is an extremely rare type of cardiac mass. It may cause obstruction of the left ventricular outflow tract (and lead to progressive damage of the valve leaflet itself. Multimodality imaging including echocardiography and cardiac MRI plays an essential role in perioperative evaluation for this rare condition.

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**Disclosures**
None.
Figure 1. Transesophageal echocardiogram and cardiac MRI images. Transesophageal echocardiogram in long-axis (A) and short-axis (B) view showed a large cystic mass (arrowhead) attached to the bicuspid aortic valve, which leads to left ventricular outflow tract obstruction. Short axis view by T2-weighted turbo spin echo image (C), 3-chamber view by inversion recovery fast low angle shot gradient echo sequence (D), and basal short axis view by inversion recovery fast low angle shot gradient echo sequence (E) showed there was a cystic mass (arrowhead) located on the aortic valve.

Figure 2. Intraoperative image as well as pathological finding of cyst mass of this patient. A and B, Surgical exploration showed a bluish cystic mass (arrowhead) attached to the bicuspid aortic valve with a broad base. C, Histological examination revealed the cystic cavity surrounded by a fibromyxoid wall with an internal lining of endothelial cells.
Multimodality Images of a Giant Blood Cyst Originating From the Bicuspid Aortic Valve
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