A 16-year-old youth was admitted to our cardiology department because of echocardiographic evidence of an aneurysmal cavity close to the right atrium. The patient was asymptomatic, and was referred initially for a cardiac murmur assessment; he had no personal or family history of cardiac disease, trauma or other illness. Physical examination was unremarkable except for isolated, mild, cardiac systolic murmur. The standard 12-lead electrocardiogram displayed a sinus rhythm without abnormalities, even in P wave morphology.

Plain chest X-ray showed enlargement of the cardiac silhouette with normal pulmonary vasculature. Transthoracic echocardiography demonstrated a thin-walled cavity (5 × 3 cm) in continuity with the right atrium, bounded by an incomplete diaphragm set between the bottom of the right atrium and just above the tricuspid valve. The lateral side of tricuspid valve annulus was displaced into the centre of the right ventricular basis (Figs. 1 and 2). Cardiovascular magnetic resonance imaging confirmed a huge dilatation of the right atrium and showed a “paper thin” wall (Fig. 3, Supplementary data, see videos 1 and 2). No other morphological or Doppler abnormalities were found. No abnormal venous return in the right atrium, atrial septal defect, venous coronary sinus dilatation, patent foramen ovale, spontaneous contrast or thrombi were demonstrated.

In order to detect supraventricular arrhythmia, a 24-hour Holter recording was obtained, which was normal. As the patient was asymptomatic, no specific treatment was initiated. Annual cardiology follow-up was scheduled.
Figure 1. Apical four-chamber view in transthoracic echocardiography, showing the right atrial appendage aneurysm (A). Right atrium (B) and right ventricle (C) size were normal. The lateral side of the tricuspid valve annulus was displaced into the centre of the right ventricular basis (D).

Figure 2. Echocardiographic off-axis parasternal view. A. Right atrium appendage aneurysm. B. Right atrium. C. Right ventricle. D. Tricuspid valve.

Figure 3. Magnetic resonance imaging four-chamber view. A. Right appendage aneurysm. B. Right atrium. C. Right ventricle.

Conflict of interest statement

None.

Appendix A. Supplementary data