Clinical vignette

Andreas Kühn1*, Christian Schreiber2, and Manfred Vogt1

1Department of Pediatric Cardiology and Congenital Heart Disease, Deutsches Herzzentrum München, Lazarettstr. 36, 80636 München, Germany; 2Department of Cardiovascular Surgery, Deutsches Herzzentrum München, Technische Universität, München, Germany

*Corresponding author. E-mail address: kuehn@dhm.mhn.de

A 2-year-old boy was referred for further treatment of atrial flutter with 1:1 conduction and heart rates up to 270 b.p.m. The tachycardia was controlled with continuous intravenous application of a short acting beta-blocker (Esmolol). During transportation, ventricular fibrillation occurred, necessitating external defibrillation.

The first transthoracic echocardiogram after hospital admission demonstrated a large aneurysmatic left atrial appendage. On chest X-ray, the left upper border of the heart silhouette was significantly enlarged (Panel A). The patient’s history revealed a patch closure of a large secundum atrial septal defect at the age of 1 year. The chest X-ray after the operation showed an unusual enlargement of the heart. Paracardial effusion was suspected on echocardiography. Retrospectively, our recent echo- and X-ray findings were identical to those seen post-operatively and both caused by the huge aneurysm of the left atrial appendage.

We confirmed our diagnosis with transoesophageal echocardiography (Panel B) and multi-detector row computer tomography (Panel C). An electrophysiological study was performed, and counter clockwise atrial flutter was ablated successfully.

In the literature, an association of aneurysmatic left atrial appendage with rhythm disturbances and an increased risk for arterial thrombo-embolism is well known. To prevent left-sided embolism and further tachycardia, we decided to resect the aneurysmatic left atrial appendage (Panel D). The post-operative cause was uneventful as well as the follow-up for 6 months now.

See online Supplementary material at European Heart Journal online for a colour version of this figure.

Panel A. Chest X-ray with significant prominence of the left upper heart border.
Panel B. Transoesophageal echocardiography, transversal view.
Panel C. CT scan.
Panel D. Intraoperative view.

Asterisk indicates left atrial appendage aneurysm. LA, left atrium; LV, left ventricle.