10-31-2000

Recognition of left atrial aneurysm by fetal echocardiography.

R R. Fountain-Dommer

H B. Wiles

C O. Shuler

S M. Bradley

Girish S. Shirali
Children's Mercy Hospital

Recommended Citation

Fountain-Dommer, R. R., Wiles, H. B., Shuler, C. O., Bradley, S. M., Shirali, G. S. Recognition of left atrial aneurysm by fetal echocardiography. *Circulation* 102, 2282-2283 (2000).

Recognition of Left Atrial Aneurysm by Fetal Echocardiography

Robin R. Fountain-Dommer, MD; Henry B. Wiles, MD; C. Osborne Shuler, MD; Scott M. Bradley, MD; Girish S. Shirali, MD

A fetus was noted to have a mediastinal mass on prenatal ultrasound. Fetal echocardiography at 26 weeks of gestation demonstrated a large cystic structure adjacent to the left atrium and left ventricle (Figure 1). The baby was born full term. Echocardiography revealed a large, thin-walled aneurysm (3×3 cm) lateral to the left atrium and communicating with it through an orifice posterior to the base of the left atrial appendage. As determined by MRI, this aneurysm extended from the transverse aortic arch to the cardiac apex (Figure 2). Angiograms were obtained with the catheter tip positioned within the aneurysm (Figure 3). None of these imaging modalities revealed thrombus within the aneurysm.

At 29 days of age, the aneurysm was approached surgically through a median sternotomy under cardiopulmonary bypass; it appeared thin-walled and translucent and extended along the lateral aspect of the left ventricle (Figure 4). When the aneurysm was opened, it was evident that a portion of its medial wall consisted of left ventricular epicardium (Figure 5). The aneurysm was resected, and its left atrial orifice was closed using autologous pericardium. Follow-up echocardiography revealed no recurrent aneurysm.

Most patients with left atrial aneurysms present with arrhythmia or abnormal cardiac silhouette on chest radiography.[1] This is the first case to be recognized by fetal echocardiography.

Reference

1. Sigfusson G, Park SC, Ettedgui JA, et al. Intrapericardial left atrial aneurysm: noninvasive diagnosis. *Pediatr Cardiol*. 1997;18:240–243.

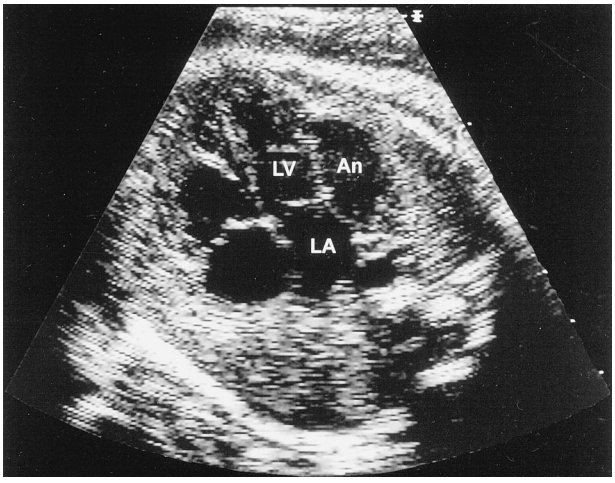

Figure 1. Four-chamber fetal echocardiogram at 26 weeks of gestation reveals a large cystic structure lateral to the left atrium (LA) and left ventricle (LV). This structure appears to communicate with the left atrium. An indicates aneurysm.

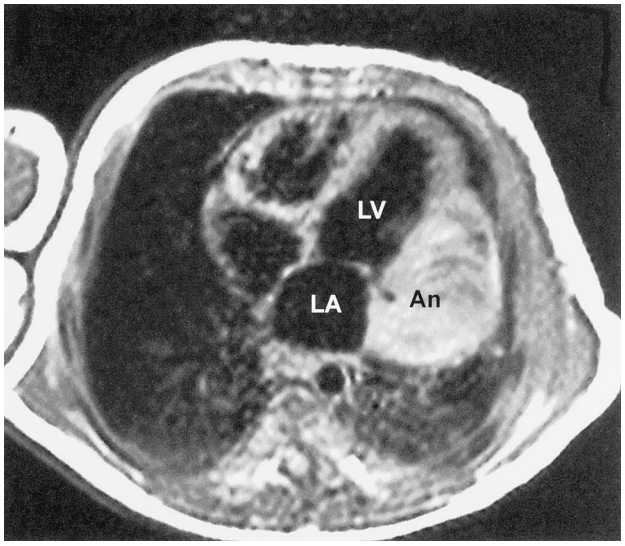

Figure 2. Coronal T1-weighted MR spin echo image shows the aneurysm (An) on the lateral surface of the left ventricle (LV) and left atrium (LA). Significant signal is present within the aneurysm, indicating nonflowing fluid.

From Children's Heart Center of South Carolina, Charleston (R.R.F.-D., H.B.W., C.O.S., S.M.B., G.S.S.), and the University of South Carolina School of Medicine, Columbia (C.O.S.).

Correspondence to Girish S. Shirali, MD, Medical University of South Carolina, 165 Ashley Avenue, PO Box 250915, Charleston, SC 29425. E-mail shiralig@musc.edu

The editor of Images in Cardiovascular Medicine is Hugh A. McAllister, Jr, MD, Chief, Department of Pathology, St Luke's Episcopal Hospital and Texas Heart Institute, and Clinical Professor of Pathology, University of Texas Medical School and Baylor College of Medicine.

Circulation encourages readers to submit cardiovascular images to the *Circulation* Editorial Office, St Luke's Episcopal Hospital/Texas Heart Institute, 6720 Bertner Ave, MC1-267, Houston, TX 77030.

(*Circulation*. 2000;102:2282-2283.)

***Circulation* is available at http://www.circulationaha.org**

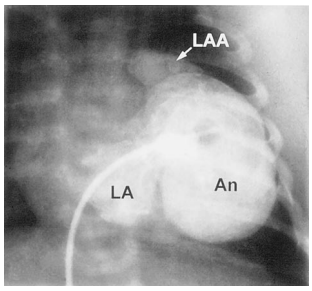

Figure 3. Angiogram with catheter tip in left atrial aneurysm (An). Communication between left atrium (LA) and aneurysm is evident. Left atrial appendage (LAA) is visible superior to and separate from the aneurysm.

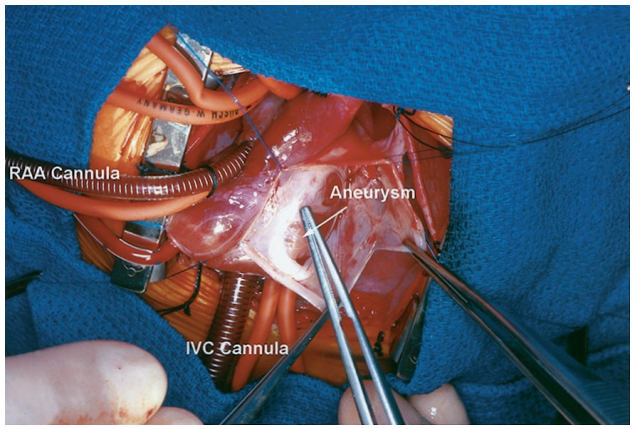

Figure 5. Intraoperative photograph showing inside of aneurysmal sac draped over left ventricle, revealing left ventricular epicardium. RAA indicates right atrial appendage; IVC, inferior vena cava.

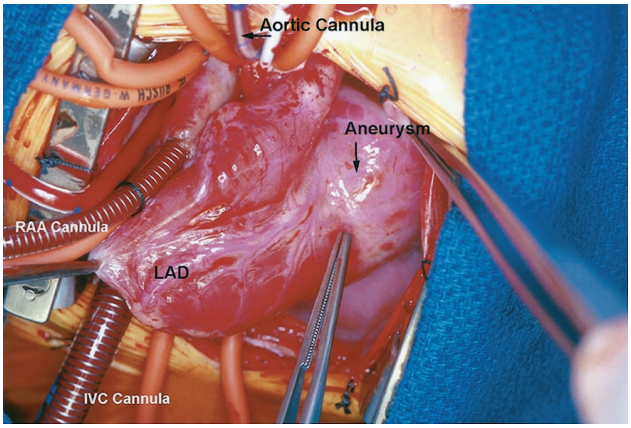

Figure 4. Intraoperative photograph taken before opening aneurysm. Lower forceps is located at margin between left ventricle and aneurysm. RAA indicates right atrial appendage; IVC, inferior vena cava; and LAD, left anterior descending coronary artery.