Giant Aneurysm of the Right Atrial Appendage in a 39-Year-Old Woman

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A 39-year-old female patient was admitted to our department after referral from another hospital because of echocardiographic evidence of an aneurysmal mass close to the right atrium. The patient complained of frequent episodes of palpitations that had been occurring for the past 4 months. She had no history of cardiac disease or trauma. On admission, her blood pressure was normal and there was no evidence of jugular venous distension or hepatosplanchnic congestion. Supraventricular tachycardia was recorded by 12-lead ECG (Figure 1A). Plain chest x-ray showed a huge enlargement of the cardiac silhouette with normal pulmonary vascular markings (Figure 1B). Both transthoracic and transesophageal echocardiography demonstrated a thin-walled outpouching cavity (15×8.5 cm) in continuity with the right atrium, just above the tricuspid valve and overlapping the right ventricular free wall as well as the outflow tract with the pulmonary artery (Figure 1D and 1E). A patent foramen ovale was also present. Angiography confirmed the presence of the right atrial aneurysm and revealed normal coronary arteries (Figure 1C and Movie I). Cardiovascular magnetic resonance (Harmony; Siemens, Enlongen, Germany) confirmed a huge dilatation of the right atrium and showed a very thin, hyperenhanced wall (Figure 1F through 1H and Movie II). The patient underwent surgical resection of the aneurysm with concomitant Cox maze III modified radioablation and closure of the patent foramen ovale (Figure 2A and 2B). Pathological examination of the resected atrial tissue revealed a paper-thin wall with focal endocardial fibrosis in the absence of inflammation, features consistent with idiopathic right atrial aneurysm (Figure 2C and 2D). The patient immediately resumed sinus rhythm and was discharged home without symptoms 7 days after surgery (Figure 2E).

Disclosures

None.

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The online-only Data Supplement, consisting of Movies I and II, is available with this article at http://circ.ahajournals.org/cgi/content/full/115/7/e194/DC1.

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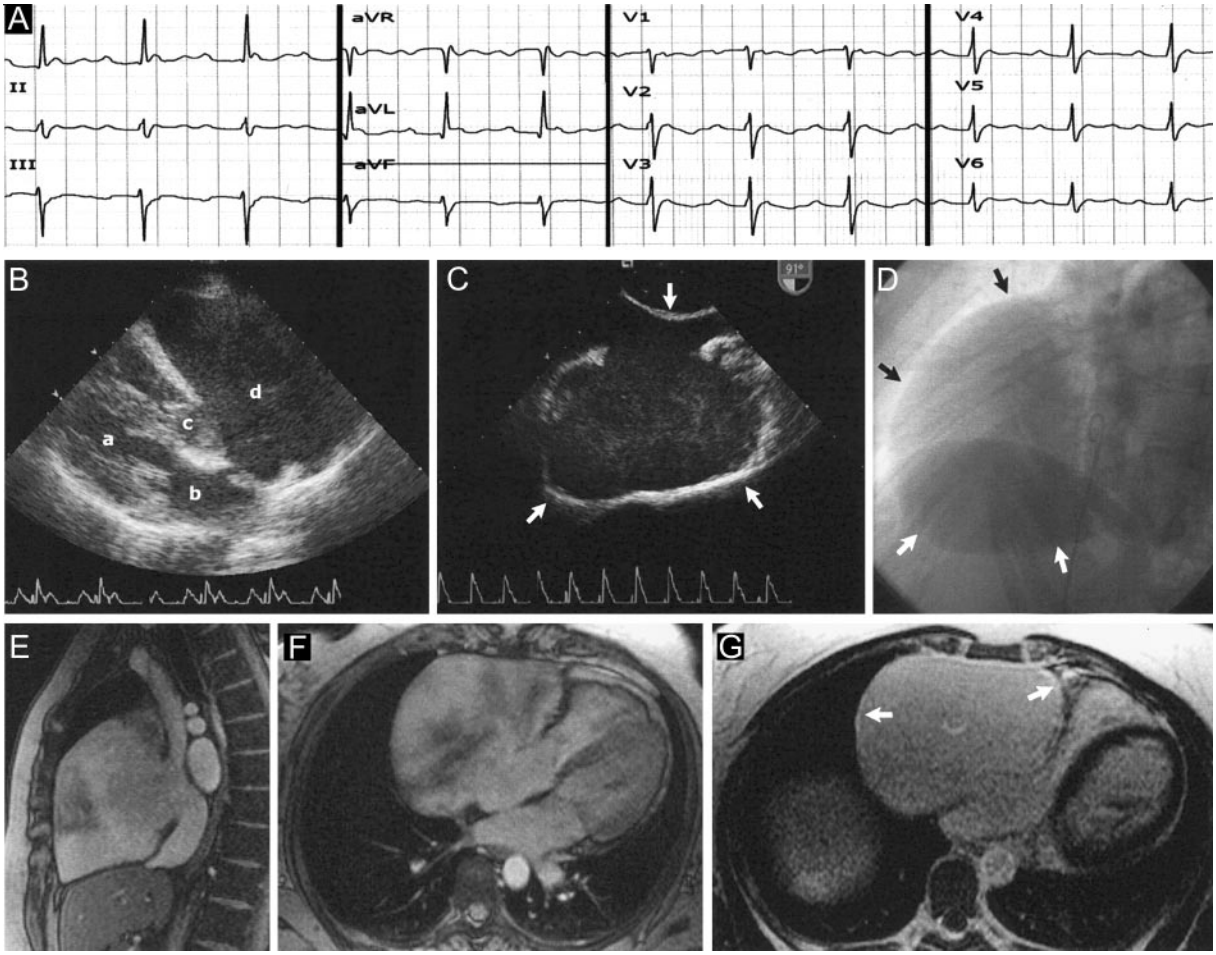

Figure 1. Imaging studies before surgery. A, ECG shows supraventricular tachycardia. B, Transthoracic echocardiogram in off-axis parasternal view demonstrates a giant right atrial aneurysm (d). C, Transesophageal echocardiogram in bicaval view shows a giant right atrial aneurysm with spontaneous echo contrast within the cavity. D, Anteroposterior angiography showing huge enlargement of the right atrium. E and F, Cardiovascular magnetic resonance views of the thin-walled right atrial aneurysm occupying much of the mediastinum, with normal confluence of both caval veins. G, Contrast-enhanced magnetic resonance view demonstrating a rim of hyperenhancement within the aneurysmatic atrial wall (arrows). a indicates left ventricle; b, left atrium; and c, tricuspid valve.

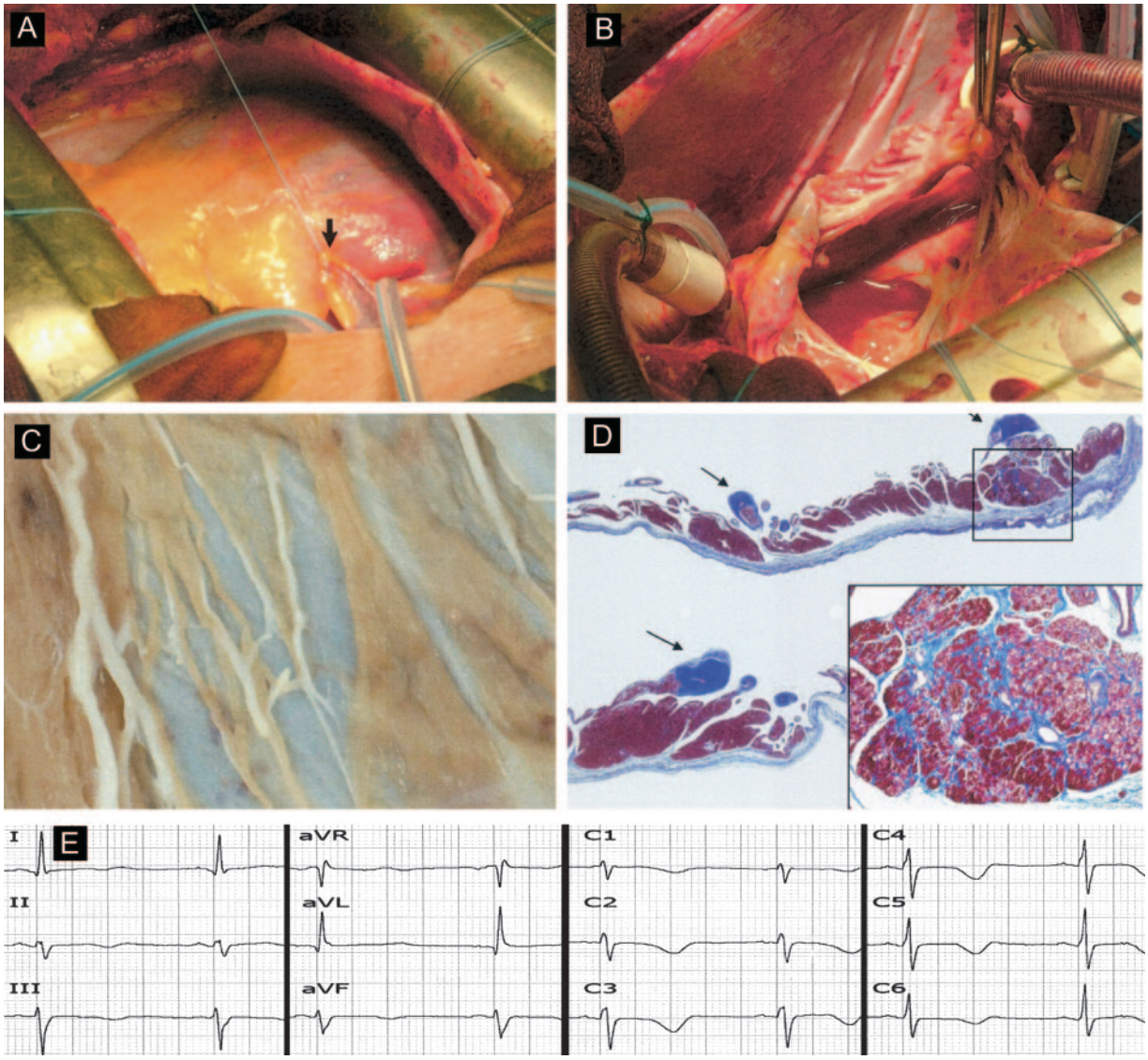

Figure 2. The upper panels include 2 surgical views. A, Large right atrial appendage fills most of the right pericardial space. The tip of the appendage is lifted by a suture (arrow). B, Right atrial appendage was resected close to the crista terminalis. In the middle panels, 2 pathological views of the resected atrial tissue are shown. C, At gross view, a paper-thin translucent wall with cordlike endocardial fibrosis, as a consequence of mural thrombus deposition and organization, is visible. D, Transmural histological section showing an extensive endocardial fibrous thickening (arrows) and focal replacement-type fibrosis of the atrial myocardium (inset) (Heidenhain–trichrome stain). E, ECG shows sinus rhythm.

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