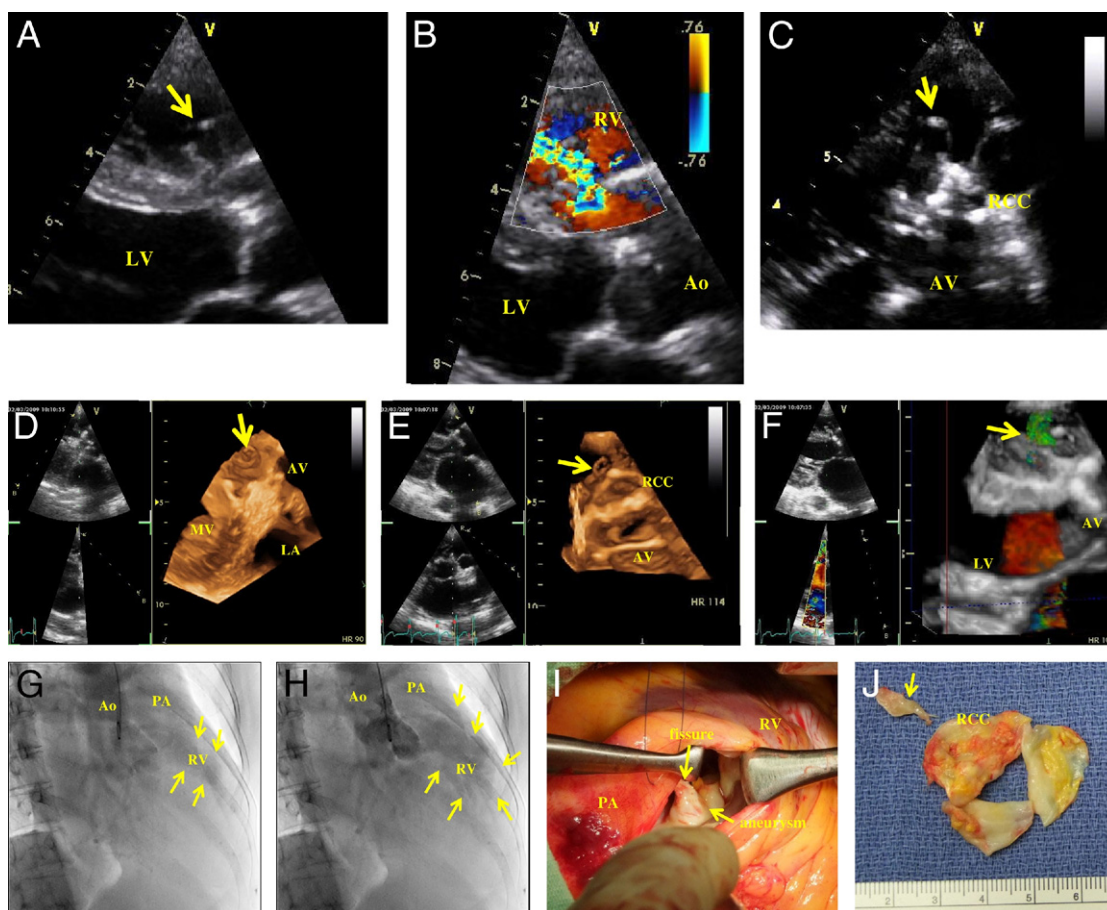


IMAGES IN CARDIOLOGY

Ruptured Aneurysm of the Sinus of Valsalva Demonstrated by 3-Dimensional Echocardiography

Takanori Kusuyama, MD, PhD,* Hidetaka Iida, MD, PhD,* Hiroaki Takeshita, MD, PhD,*
Ryotaro Wake, MD, PhD,* Shinichi Shimodozono, MD,* Yukio Yamada, MD†
Hyogo, Japan



From the *Department of Cardiology, Tsukazaki Hospital, Hyogo, Japan; and the †Department of Cardiovascular Surgery, Tsukazaki Hospital, Hyogo, Japan.
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A 67-year-old Japanese woman was admitted to our hospital because of orthopnea. Trans-thoracic echocardiography (Vivid7, GE Healthcare, Milwaukee, Wisconsin) demonstrated a ruptured aneurysm of the sinus of Valsalva in the right coronary cusp (RCC) and abnormal left-to-right shunting (A to C). Three-dimensional echocardiography demonstrated that the aneurysm protruded into right ventricle (RV) (D, Online Video 1, E, Online Video 2). Color Doppler 3-dimensional echocardiography showed left-to-right shunting through the ruptured aneurysm of Valsalva (B to F, Online Video 3). Aortography confirmed the abnormal left-to-right shunt from the sinus of Valsalva to the RV (G and H, Online Video 4). The patient had coexisting severe aortic stenosis and mitral valve (MV) prolapse. We performed double valve replacement, resection and direct closure of the aneurysm of Valsalva, closure of the ventricular septal defect (type I), and a Maze procedure (I and J). The patient experienced a remission of congestive heart disease after the operation. Ao = aorta; AV = aortic valve; LV = left ventricle; PA = pulmonary artery.