ANOMALOUS LEFT CIRCUMFLEX ARTERY COEXISTING WITH ATRIAL SEPTAL DEFECT

Sama Alchalabi, M.D.; Sayf Khaleel Bala, M.D.; Mohamed El-Beheary, M.D.; Su Min Chang, M.D.
Houston Methodist DeBakey Heart & Vascular Center, Houston Methodist Hospital, Houston, Texas

A 65-year-old male with a history of hypertension, and paroxysmal atrial fibrillation presented to the Houston Methodist DeBakey Heart & Vascular Center complaining of frequent episodes of atrial fibrillation that affected his daily activities. The patient was being considered for a radiofrequency catheter ablation (RFCA) of the pulmonary veins to prevent recurrent episodes. A cardiac computed tomography (cardiac CT) was performed to better delineate the anatomy of the pulmonary veins. However, an unexpected anomaly was found: an anomalous left circumflex artery was seen to arise from the right sinus of Valsalva (Figure A). Also, a large secundum atrial septal defect was noted creating a left-to-right shunt (Figure B).

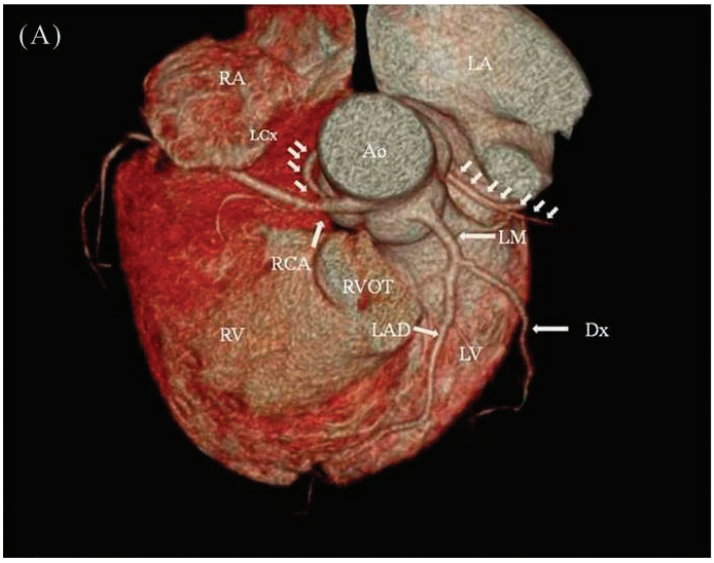

Figure A. Three-dimensional reconstruction of the heart showing left circumflex artery arising near the origin of the right coronary artery, running posteriorly around the aortic root, and entering the left atrioventricular groove (multiple arrows). RV: right ventricle; RVOT: right ventricular outlet tract; RA: right atrium; LA: left atrium; LV: left ventricle; LM: left main; LCx: left circumflex coronary artery; LAD: left anterior descending artery; Dx: diagonal branch of the LAD.

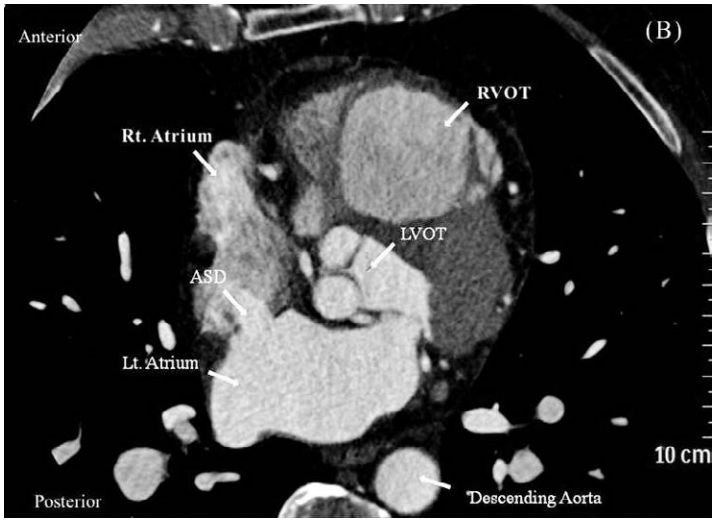

Figure B. Axial cardiac computerized tomography demonstrates large defect in the mid-interatrial septum consistent with large secundum atrial septal defect (arrow). RVOT: right ventricular outflow tract; LVOT: left ventricular outflow tract; ASD: atrial septal defect.