Anomalous origin of the right coronary artery from the pulmonary artery coexisting with aortopulmonary window and partial abnormal drainage of the pulmonary vein

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Case report

Anomalous origin of the right coronary artery from pulmonary artery (ARCAPA) is an exceedingly rare congenital pathology. We present a 22-year-old male with a clinical recognition of ARCAPA established earlier by angiography. Repeated evaluation of our Institute discovered associated congenital pathologies—small aortopulmonary window and drainage of the right pulmonary veins to the superior vena cava.

The patient was entirely asymptomatic with no abnormal findings in physical examination. Both standard electrocardiogram and Holter monitoring did not detect any abnormality. The ergospirolemetry revealed a good exercise capacity with max. VO2 34.03 mL/min/kg.

The transthoracic echocardiography revealed right coronary artery arising from the main pulmonary artery (Panel 1), whereas left main coronary artery had normal origin. Heart chambers were normal in terms of morphology and function. Colour Doppler demonstrated vigorous flow within the collateral arteries between the left and right coronary artery best seen within the interventricular septum (Panel 2). Computed tomographic angiography confirmed abnormal origin of right coronary artery arising from the pulmonary trunk (Panel 3) and showed left coronary artery arising above the aortic bulb. Diminutive aortopulmonary window located close to the left coronary artery was demonstrated for the first time (Panel 4). The examination disclosed abnormal drainage of the upper and middle lobe pulmonary veins to the vena cava superior (Panel 5).

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