Multidetector Computed Tomography Demonstrates Double-Inlet, Double-Outlet Right Ventricle

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Picture 1.

Picture 2.
A 49-year-old woman was admitted to our hospital with syncope and dyspnea on effort. She had been diagnosed as having a congenital heart disease of undefined etiology in infancy, and since then she had neither medical follow-up nor medication. Physical examination revealed systemic cyanosis, clubbing, and systolic murmur and subsequent transthoracic echocardiography (Picture 1A, B) showed dilation and hypertrophy of the right ventricle (RV) and hypoplastic left ventricle (white star). Aortic root arising from the RV and the overriding mitral valve were also detected. However, the infundibulum and pulmonary artery (PA) were not clearly delineated. Thus, contrast-enhanced multidetector computed tomography was performed. The volume-rendered 3-dimensional images delineated a hypoplastic PA (Picture 2A, white arrow), a persistent left superior vena cava (Picture 2A, white arrowhead), and enlarged collateral vessels (Picture 2B, white arrows). The oblique coronal images (Picture 2C, D) and the transaxial images showed the hypoplastic PA deriving from the infundibulum (Picture 2C, white arrowheads), the malalignment between the infundibular septum (Picture 2C, black arrowhead) and trabecular septum, hypertrophied muscular bar (Picture 2C, white arrow), and atrial septal defect (Picture 2D, black arrowhead). These findings confirmed this rare adult case of double-inlet, double-outlet RV, one of functional single ventricle (1).

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Reference