Connection between the Right Upper Pulmonary Vein to the Superior Vena Cava in a Patient with a Secundum-Type Atrial Septal Defect

The Editor,

A 23-year-old man was referred to our echocardiography department for further evaluations of right ventricular enlargement. His chief complaint was dyspnea on exertion (New York Heart Association’s functional class II). Transthoracic echocardiography demonstrated severe right ventricular enlargement and a large secundum-type atrial septal defect (ASD). The defect was confirmed by 2D and 3D transesophageal echocardiography (TEE). Furthermore, 2D TEE with an agitated saline injection and 3D TEE revealed a connection between a vein and the superior vena cava [Figure 1a-c and Videos 1, 2]. Computed tomographic angiography of the pulmonary veins confirmed the connection between the superior pulmonary vein and one half of the distal superior vena cava [Figure 1d and e]. The patient was, therefore, referred for corrective surgery.

ASD is the most congenital cardiac disease in adulthood that can be accompanied with partial anomalous pulmonary vein connection (PAPVC).[1] PAPVC is a condition defined as abnormal connection of one, two, or three pulmonary veins(s) (PV) to right circulation. This abnormal connection in more prevalent in right PV(s) than left PV(s).[2] The sinus venosus-type ASD accompany PAPVC more often than secundum-type ASD, i.e., 85% and 10–15% respectively.[3] The coexistence of secundum and sinus venosus-type ASD has been reported in 7% ASD cases.[4] In secundum-type ASD, abnormal connection of left PVs is more common than right PVs,[5] so the presence of an anomalous connection between the right PV and a secundum-type ASD is occasionally seen, and any experienced cardiologist should consider it while evaluating a patient with a secundum-type ASD because of detection of PAPVC may lead to change in treatment plan.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Submitted: 16-Nov-2018
Accepted: 10-Mar-2019
Published: 17-Jul-2020

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How to cite this article: Hosseinsabet A. Connection between the right upper pulmonary vein to the superior vena cava in a patient with a secundum-type atrial septal defect. Ann Card Anaesth 2020;23:376-7.

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