Abstract: 1647

A case report of Cor Triatriatum Sinistrum and persistent left superior vena cava in a patient with multi-vessel coronary artery disease

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Topic(s):
Transesophageal Echocardiography

Citation:
European Heart Journal - Cardiovascular Imaging (2019) 20 (Supplement 1), i1168

Background
Cor Triatriatum Sinister (CTS) is a rare congenital abnormality, accounting for about 0.1–0.4% of all congenital heart diseases and characterized by the presence of a fibromuscular membrane that subdivides the left atrium (LA) into two chambers in the classical form. Persistent left superior vena cava (PLSVC) is the most common congenital anomaly of thoracic venous system. The unique nature of our clinical case is the combination of an incomplete form CTS and PLSVC diagnosed incidentally before CABG.

Case presentation
A 57-year-old male was admitted for exertional dyspnea and chest pain. He had a past medical history of mild hyperlipidemia and mild hypertension. The patient’s electrocardiogram (ECG) demonstrated complete RBBB.

Transthoracic echocardiography (TTE) showed a mildly enlarged LA; and a visible presence of a membranous band in the mid portion of the LA(Figure 1). Its orifice was about 23 mm in diameter with a mean pressure gradient of about 3 mmHg. The values of left ventricle (LV) ejection fraction, end-diastolic and end-systolic volume indexes as well as systolic pulmonary artery pressure were normal. The two 2-D findings were further confirmed by transesophageal echocardiography (TEE), which visualized a non-obstructing fibromuscular membrane and a dilated coronary sinus with a draining PLSVC (Figure 2). Coronary angiography revealed three-vessel coronary disease.

According to the age of the patient, the presence of CAD symptoms and the absence of any symptoms associated with arterial hypoxemia, it was decided to perform isolated CABG.

There were no postoperative complications, a patient was discharged 8 days after surgery. No symptoms related to CTS were observed during a six-months follow-up.

Discussion
CTS is a rare congenital cardiac anomaly which is associated with other cardiac defects in up to 50% of cases. The primary concern with CTS is the potential for the LV inlet obstruction, leading to mitral stenosis physiology. Hemodynamic and clinical changes at CTS are determined by the size of the atrial membrane opening connecting the LA chambers, and the presence of the atrial septal defect (ASD). Appropriate TTE and TEE have to demonstrate the anatomy of the LA membrane and the presence of flow obstruction. In addition, pulmonary venous and atrial septal anatomy should be evaluated, as these may be abnormal in this condition.

In our case, a non-obstructive incomplete form of CTS with the typical relapsing pulmonary veins and the absence of ASD became the main criteria for surgical decision making.

Conclusion
The presence of a CTS three-atrium heart is not always an indication for surgery and may be accidentally
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In our case, a non-obstructive incomplete form of CTS with the typical relapsing pulmonary veins and the absence of ASD became the main criteria for surgical decision making.

Conclusion
The presence of a CTS three-atrium heart is not always an indication for surgery and may be accidentally identified. Meanwhile clinical manifestation of this anomaly may mimic CAD symptoms and vice versa. The volume of surgery in adult patients with similar congenital heart defects is determined by the degree of obstruction severity at the level of the LA membrane and the clinical status of the patient.