CASE REPORT

Ruptured Aneurysm of the Noncoronary Sinus of Valsalva into the Right Atrium

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Sinus of Valsalva (SV) aneurysm is rare cardiac lesion with variable clinical presentation. We presented a case of a 41-year-old female who was admitted to our Center because of severe heart failure and signs of ruptured aneurysm of the SV into the right atrium. Transthoracic echocardiography confirmed communication between noncoronary SV and right atrium measuring 12 mm in diameter, tricuspid insufficiency, bialtrial dilatation and preserved left ventricular function. Urgent heart catheterization showed normal coronary arteries. Surgical repair with patch repair of the ruptured aneurysm was performed. Control echocardiography showed no communication with regression in tricuspid insufficiency. Eight days after surgery the patient was discharged home in good condition with no symptoms. Rupture of SV aneurysm may produce serious hemodynamic instability with heart failure or sudden death. Our experience supports the concept that early diagnosis and surgical treatment can save lives for most of the patients. Key words: Sinus Valsalva, aneurysm, rupture.

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1. CASE REPORT

Aneurysm of sinus Valsalva (SV) is a rare cardiac disorder with variable clinical presentation (1). It arises from the discontinuity between the tunica media of aorta and aortic valve annulus. Right coronary cusp is usually the place of aneurysm formation (2). It can be congenital when associated with other cardiac disorders such as ventricular septal defect, membranacea subaortna stenosis or aortic regurgitation (3,4). In a smaller number of cases it occurred and is associated with endocarditis, atherosclerosis, trauma, syphilis, or aortic dissection. It may be asymptomatic or present symptoms of angina or valvular regurgitation (5). In cases of rupture can lead to severe hemodynamic instability that results in acute cardiac relaxation and death in a short period of time. The most frequent is the rupture of the ventricle, intraventricular septum or pericardial space (6,7).

We presented a rare case of nontraumatic rupture of noncoronary SV in the right atrium. 41-year old patient was admitted to our center because of cardiac decompensation. 20 days ago from perfect health suddenly felt shortness of breath and shortly thereafter appeared and the island of the lower extremities and abdomen. During hospitalization, the local institution underwent transthoracic echocardiography (TTE) in which documented aneurysmal enlargement of noncoronary SV with visible communication between the aorta above the sinus and right atrium and the left-right shunt.

At admission: blood pressure 135/78, pulse 109/minute, distended jugular vein with the present hepatojugular reflux. Expressed pretibial edema, ascites, and intense noise in precordium. Control TTE confirm the existence of communication between noncoronary SV and right atrium width of about 12 mm, tricuspid valve regurgitation of 3+, left ventricular ejection fraction of 50%, bialtrial dilatation (right atrium 540mm) and dilatation of the right ventricle of 57mm (Fig. 1). Upon admission indicating the urgent coro-
nary angiography that shows normal findings on coronary arteries.

After a short preoperative preparation the surgery is done under general anesthesia with the use of cardiopulmonary bypass: Sternotomy medialis, Patch Plastica sinus Valsalva, Suture directe fistulae aortoatrialis l.dex. Intraoperative findings: the heart globally increased, especially in the right cavity with enlarged appendix, which extends along the ascending part of aorta, ascending aorta about 3cm of normal walls, without signs of dissection, ruptured aneurysmal formation in the medial part of the right atrium, which communicates with the aorta, aortic valve with regular valve cusps and coaptatie, and in the projection of noncoronary valve defect size of 1x1 cm, which communicates with the right atrium (Figure 2). The defect is closed with a synthetic patch, and after that with the care for atrial communication with plaget sutures (Figure 3). Total duration of perfusion: 77 minutes. Aortic cross terminal: 59 minutes.

Control postoperative TTE indicates the absence of earlier communication with a significant reduction in the dimensions of both the atrium, the reduction of mitral and tricuspid regurgitation, improved contractility of the left ventricle (EF: 56%) and pulmonary arterial pressure within normal limits. Postoperative stream flow is normal.

The patient was discharged on eighth postoperative day in stable condition, without symptoms.

Our experience supports the concept that early diagnosis and surgical treatment can save the life of most patients. The results of surgical correction are very good, mortality and morbidity after these procedures is very small with significant symptomatic improvement.

REFERENCES