

Ruptured aneurysm of the noncoronary sinus of Valsalva into the right atrium

Diana Rudan*, Stanko Biočić, Željko Đurašević, Josip Vincelj

University Hospital Dubrava, Zagreb, Croatia

Aneurysms of sinus of Valsalva are rare cardiac abnormalities, with an incidence of less than 0.15%, and marked male predominance.¹ They are dilatations of the aortic sinuses, and are classified as congenital or acquired. The congenital aneurysms are more common and often caused by weakness at the junction of the aortic media and the annulus fibrosus. They commonly coexist with other malformations such as ventricular septal defect, anomalies of the aortic valve and coarctation of the aorta. Acquired aneurysms are caused by conditions affecting the aortic wall, such as infections, trauma, or connective tissue disorders. It may be asymptomatic, or it may present as angina, or with symptoms of valvular insufficiency. Once ruptured, it often produces hemodynamic instability. The frequency of ruptured sinus Valsalva aneurysm varies according to the location: 60% are located in the right sinus, 42% in the noncoronary sinus and 10% in the left sinus.² According to the location and frequency, rupture of a sinus Valsalva aneurysm occurs principally in the right ventricle (60%) or in the right atrium (29%). Extracardiac ruptures are rare. When rupture is suspected, immediate diagnosis should be pursued with transthoracic echocardiography.

We present a case of 33-year-old man admitted to our emergency department with symptoms of abdominal pain, abnormal liver function tests and new diagnosed heart murmur. On physical examination his blood pressure was 120/60 mmHg and heart rate of 95 bpm. Jugular venous distension was present. There were no pulmonary rales or

signs of peripheral edema. On auscultation, there was continuous systolic-diastolic murmur of grade III/IV, best heard at the apex. Chest X-ray showed cardiomegaly. Transthoracic echocardiography showed dilatation of the left ventricle, reduced systolic function, dilatation of the right ventricle and left atrium, and noncoronary sinus Valsalva aneurysm ruptured in the right atrium. The aortic valve was three-leaflet, and had no insufficiency, no ventricular septal defect was present. The patient underwent corrective surgery, confirming the aneurysm of noncoronary sinus Valsalva ruptured in the right cardiac chambers. The patient has been followed-up in our cardiology clinic with complete recovery.

KEYWORDS: aneurysm of sinus Valsalva, echocardiography, corrective surgery.

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*Address for correspondence: Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia.

Phone: +385-1-2902-444

E-mail: drudan3@yahoo.com

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