

Sinus of Valsalva aneurysm with multiple complications

Clinical Case Portal

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Abstract

Aneurysm of sinus of valsalva (SVA) is a rare congenital condition. Our subject demonstrated multiple complications of sinus of valsalva aneurysm which included heart failure from significant aortic regurgitation¹, obstruction of the right ventricular outflow tract² and myocardial infarction secondary to coronary artery compromise.

Introduction

An elderly gentleman presents with worsening shortness of breath on exertion and intermittent chest pain. His background includes recent diagnosis of myocardial infarction, previous deep venous thrombosis, ulcerative colitis and hypertension. His clinical finding was consistent with left ventricular failure with a significant aortic regurgitation murmur. He also has a longstanding abnormal ECG consistent with left ventricular hypertrophy and pulmonary hypertension.

Case Report

His transthoracic echocardiogram reveals a huge sinus of valsalva aneurysm affecting the right coronary sinus with a dimension of 6.2 x 5 cms with no fistula or rupture complications. There was an eccentric moderate to severe aortic regurgitation with a pressure half- time of 286 m/sec. Other findings included hypokinesia in the posterior- lateral wall and a mildly dilated impaired left ventricular function.

Discussion

Aneurysm of sinus of valsalva (SVA) is a rare congenital condition with prevalence of 0.14-0.96% individuals with open heart surgery. It is usually congenital affecting predominantly the right coronary cusp. Our subject demonstrated multiple complications of sinus of valsalva aneurysm which included heart failure from significant aortic regurgitation¹, obstruction of the right ventricular outflow tract², myocardial infarction secondary to coronary artery compromise and thromboembolic phenomena. SVA also occurs in ulcerative colitis secondary to Takayashu's disease and syphilitic aortitis. With consultation, the decision was for conservative treatment. Our subject has a late presentation and highlights the importance of echocardiogram for assessing radiological cardiomegaly and abnormal ECGs. This case also highlight the value of echocardiography as an initial assessment tool in acute coronary syndrome.

References

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- 2 Gefland EV, Bzymek D, Johnstone MT. Sinus of Valsalva aneurysm with right ventricular outflow tract obstruction: evaluation with Doppler, real-time 3 dimensional and contrast echocardiography. *Circulation*. 2007;115(2):e16-7.
- 3 Warthen RO. Congenital aneurysm of the right anterior sinus of valsalva (interventricular aneurysm) with spontaneous rupture into the left ventricle. *Am Heart J*. 1949;37(6):975-81.

Fig. 1 :

[Parasternal Long axis view reviewing sinus of valsalva aneurysm](#)



Fig. 2 :

[Parasternal short axis view at the level of aortic valve](#)

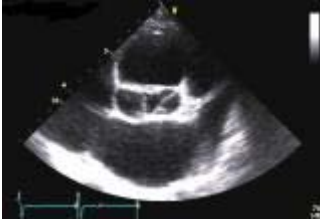


Fig. 3 :

[Parasternal short axis view at the level of aortic valve](#)

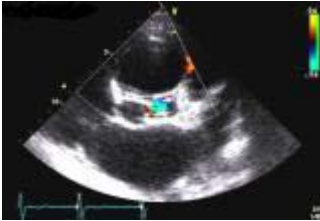


Fig. 4 :

[Apical five chamber view](#)

