Pseudo-aneurysm of Mitral-Aortic Intervalvular Fibrosa: An Imaging Perspective

Biswajit Paul¹, Vivek Kumar², Ankush Sachdeva³, Ashok K Omar⁴, Sameer Shrivastava⁵

A forty year old Indian male presented with complaints of vague chest pain of six to seven days duration. He had no recent history of fever and chest trauma. Clinically he had signs of wide pulse pressure and a diastolic murmur. His ECG and chest X-ray were normal.

Transthoracic echocardiography (TTE) showed an aneurysm between the ascending aorta and the left atrium with a fistulous communication between them. The aneurysm freely communicated with the left ventricular cavity. It expanded in systole and collapsed in diastoile. The tricuspid aortic valve showed aortic regurgitation of moderate severity (Figures 1, 2). Transesophageal echocardiography (TEE) delineated the aneurysm more clearly which measured 35×25 mm in diameter. Rests of the findings were essentially the same as that of TTE (Figure 3). The above findings of echo were confirmed by contrast CT scan (Figure 4).

Pseudoaneurysm of mitral-aortic intervalvular fibrosa (MAIVF) is rare abnormality. The proposed causes include congenital muscle weakness in atrio-ventricular groove, anomalous origin of coronary arteries, trauma, infective endocarditis, tuberculosis, syphilis. Because it is located between the anterior mitral leaflet and the non-coronary and left coronary cusps, it is related to the functional integrity of both these valves. It is associated with complications of rupture into the left atrium, pericardium or into the aorta.¹ The condition mimics rupture of sinus of Valsalva aneurysm. Originally described in young Africans following trauma to chest wall, the condition has been described in other races as well.² One of the most important feature of this aneurysm is its pulsating nature and free communication with the left ventricular cavity. Differentiating the formed layers is difficult and therefore some prefer to use the term ‘aneurysm’ instead of ‘pseudoaneurysm’. In symptomatic cases surgical closure is indicated.

We aim to highlight this case for its rarity and occurrence in an individual of Indian origin.

¹Consultant, ²Principal Consultant, ³Jr Consultant, ⁴Director, ⁵Assoc. Director and HOD, Fortis Escorts Heart Institute, Department of Noninvasive Cardiology, New Delhi
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