A rare case of submitral left ventricular aneurysms

Sir,

We present to you, a rare case report of a patient suffering from submitral left ventricular aneurysm.[1-4]

An 89-year-old female presented with approximately a 30-year history of progressively worsening dyspnea for the past 30 years and a history of paroxysmal nocturnal dyspnea and orthopnea for 3 days. She was admitted for stabilization and evaluation. There was no history suggestive of rheumatic fever. On examination, she had a heart rate of 120/min, blood pressure of 100/60 mmHg, jugular venous distension (8 cm above the angle of Louis), and pedal edema. The apex was in the 6th left intercostal space, 2 cm outside the midclavicular line. On auscultation, soft S1 and LVS3 were present. A Grade 4/6 pan-systolic murmur radiating toward the axilla was heard. There was also a pan-systolic murmur in the left 3rd parasternal region which increased during inspiration. Chest auscultation revealed bilateral basal crepitation. Abdominal examination revealed tender hepatomegaly (liver span: 18 cm). All peripheral pulses were bilaterally and equally palpable. Her family history included some cases of cardiopathy. The electrocardiogram showed sinusal rhythm with rectification of the ST segment in inferior and lateral facies, with a chest X-ray showing the pulmonary area without any abnormalities and the cardiac area with a calcified area next to the region corresponding to the left cardiac appendage. Doppler echocardiography [Figures 1 and 2] revealed cardiac chambers with normal dimensions, systolic performance of the left ventricle preserved, and the discrete presence of mitral valve reflux. Of significance was the presence of a dilatation because of aneurysm in the posterior area of the left ventricle with an ostial communication between the aneurysm and this cardiac chamber. The flow register through this communication was not obtained because the position of the aneurysm in the mitral subannular plan was clear. In the following hemodynamic study, it was revealed a pressure gradient of 6 mmHg between the right branch and the left branch of the pulmonary artery. The coronary arteriography showed right coronary artery dominance without lesions; a long left anterior descending artery without stenosis; a short-sized left circumflex coronary artery in the atrioventricular sulcus occluded at the beginning, which received collateral circulation from the right and left coronary arteries; and the angiocardiography showed an increase of the end-systolic volume of the left ventricle, with diffuse hypokinesis. The mitral valve was competent, and passage of contrast from the mitral subvalvar region to a retrocardiac and calcified aneurysmatic formation could be observed. The aorta and the main pulmonary artery were normal, with a relative stenosis evident in the right

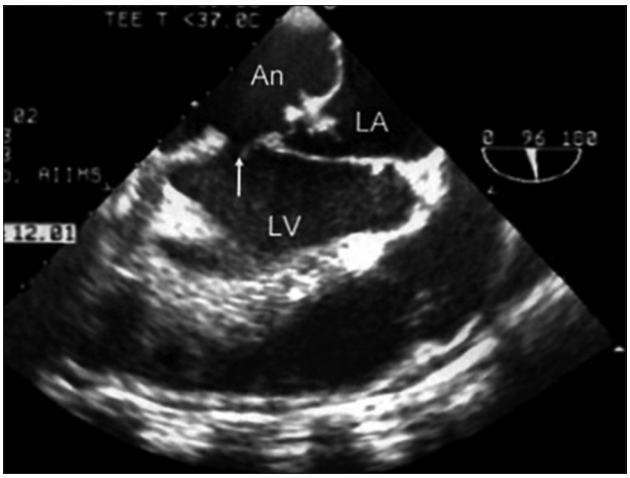

Figure 1: Cardiac chambers with normal dimensions, systolic performance of the left ventricle preserved, and the discrete presence of mitral valve reflux

branch of the pulmonary artery by extrinsic compression. After the consultant meeting, surgical treatment was opted for. During surgery, the aneurysm was located between the left appendage and the atrioventricular sulcus, and it was compressing the right branch of the pulmonary artery against the aorta. After the cardiopulmonary bypass circuit was started, the aneurysm was dissected in all its extensions. Its calcified wall was broken, exposing its unique multilocular chamber, with a great amount of organized and recent thrombus was removed. The surgery consisted of the suture of a double patch of bovine pericardium, occluding the aneurysm ostia, completed with additional stitches, including the left appendage. A laceration of the origin of the left descending coronary artery occurred during release of the aorta. After observing that the circumflex artery was free with independent output at the injured location, a saphenous vein bypass was opted for to correct the accident. A spontaneous recovery of heart beats occurred after removal of the aortic clamp, but until the end of the surgery, important polymorphic cardiac arrhythmias occurred that were resistant to our use of lidocaine, amiodarone, and metoprolol. In the postoperative care unit, the great problem was control of cardiac arrhythmias, ventricular and supraventricular. Various antiarrhythmic medications were started, but this treatment was not successful as unfortunately our patient died on the 7th day of the postoperative period, in an episode of atrioventricular dissociation, not responsive to cardiopulmonary resuscitation maneuvers.

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Nil.

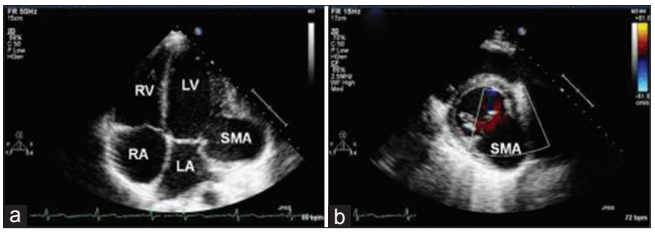

Figure 2: (a) Presence of a dilatation on because of aneurysm in the posterior area of the left ventricle. (b) An ostial communication between the aneurysm and this cardiac chamber

Conflicts of interest
There are no conflicts of interest.

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