Mitral valve aneurysm, an unusual lesion not to miss

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Mitral valve aneurysm, an unusual lesion not to miss

Aneurisma da Valva Mitral, uma lesão incomum a não perder

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We present the case of a 65-year-old man with a history of high blood pressure. During a follow-up appointment, a holosystolic murmur, III/VI, radiating to the armpit was detected. He was cardiovascularly asymptomatic. A complete echocardiogram was performed, with the following findings: Severely dilated left atrium; mitral valve with an aneurysmal lesion at the A2 scallop (Figure 1) causing severe regurgitation with an eccentric jet. There was systolic flow reversal in the pulmonary veins. The mechanism of regurgitation is Carpentier II. The rest of the valves had normal morphology and function, biventricular function, large vessels, and the pericardium. There was an intermediate probability of pulmonary hypertension. Findings were confirmed, and the lesion was further characterized using transesophageal echocardiogram and three dimensional reconstruction (Figure 2).

The patient opted not to undergo surgery. He is under clinical and echocardiographic follow-up every three months and remains asymptomatic.

Mitral valve aneurysm is a rare condition, with a prevalence estimated between 0.02 and 0.29%. It can cause valve regurgitation and ventricular dysfunction with multiple consequences. It is described as a saccular lesion with thin walls protruding into the atrium during systole. Its origin has been mainly associated with endocarditis, primarily of the aortic valve, with worse prognostic implications. However, an infectious origin has not been found in all cases.

It is important to consider mitral valve aneurysm in the differential diagnosis of mitral lesions (endocarditis, tumors, thrombi, among others).

Ética de la publicación

1. ¿Su trabajo ha comportado experimentación en animales?:

No

2. ¿En su trabajo intervienen pacientes o sujetos humanos?:

No

Solo se recolectan datos de historia clinica

3. ¿Su trabajo incluye un ensayo clínico?:

No

solo se recolectan datos de la historia clinica

4. ¿Todos los datos mostrados en las figuras y tablas incluidas en el manuscrito se recogen en el apartado de resultados y las conclusiones?:

Sí

References

1. Vasquez-Rodriguez JF, Martínez-Caballero A, Perez-Fernandez OM, et al. Unusual Lesions of the Mitral Valve: Two Different Conditions with the Same Imaging Findings. *CASE*. 2019;3(5):204-209. doi:10.1016/j.case.2019.07.004

2. Vilacosta I, San Román JA, Sarriá C, et al. Clinical, anatomic, and echocardiographic characteristics of aneurysms of the mitral valve. *Am J Cardiol*. 1999;84(1):110-113. doi:10.1016/S0002-9149(99)00206-4

3. Stechert MM, Pletcher JR, Tseng EE, et al. Aneurysm of the Anterior Mitral Valve: *Anesth Analg*. 2012;114(1):86-88. doi:10.1213/ANE.0b013e318239c4d8

Figures

Figure 1 Transesophageal echocardiogram, mid-esophageal view at 90°, showing a mitral valve aneurysm with dimensions of 1.5 cm and 1.2 cm, causing coaptation defect and an 8 mm displacement over the annular plane.

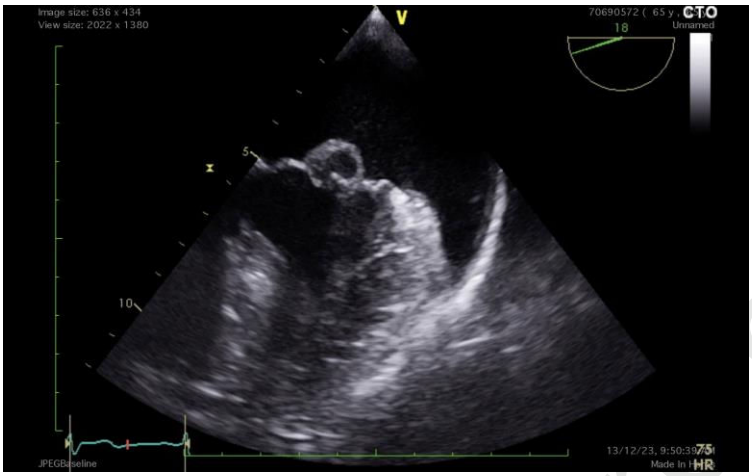

Figure 2 Three-dimensional reconstruction, transesophageal echo, and mitral valve view from the left atrium, depicting a saccular aneurysmal lesion on the A2 scallop.