



IMAGE IN CARDIOLOGY

Acquired mitral valve aneurysm due to severe aortic regurgitation



Aneurisma na válvula mitral devido a regurgitação aórtica grave

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A 52-year-old man presented to our emergency department with shortness of breath. He reported exertional dyspnea for the past five years which had worsened recently. He reported no weight loss, fever or poor appetite. His past medical history was noncontributory. The physical exam revealed a diastolic murmur best heard in the aortic area. Echocardiography showed a mildly enlarged left ventricle

with normal contraction. Severe aortic regurgitation (AR) and holodiastolic flow reversal in the abdominal aorta were present (Figures 1–4). No vegetation was seen on the aortic valve. There was an aneurysmal sac on the anterior leaflet of the mitral valve, corresponding to the site of the high velocity AR jet (video 1 and video 2 in the Supplementary material). Laboratory tests including complete blood cell count, liver and kidney function tests, erythrocyte sedimentation rate and C-reactive protein were normal. The patient refused surgical intervention and was lost to follow-up.

Acquired mitral valve aneurysm is a rare entity which has generally been reported in the context of endocarditis.



Figure 1 Transthoracic echocardiogram, 4-chamber apical view, showing the aneurysmal sac of the anterior mitral valve leaflet.



Figure 2 Transthoracic echocardiogram, long-axis parasternal view, showing the mitral valve anterior leaflet aneurysm.

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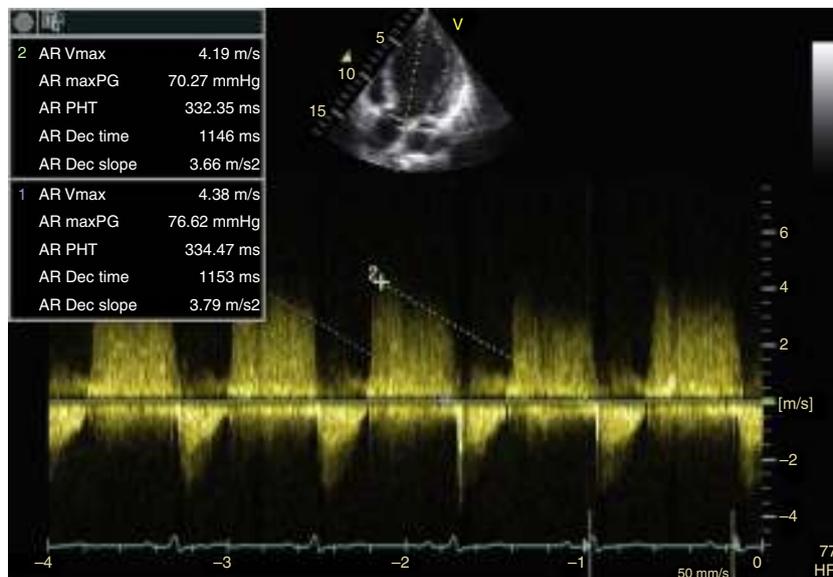


Figure 3 Continuous wave spectral Doppler recording through the aortic valve. Pressure half time is noted to be 334 ms.

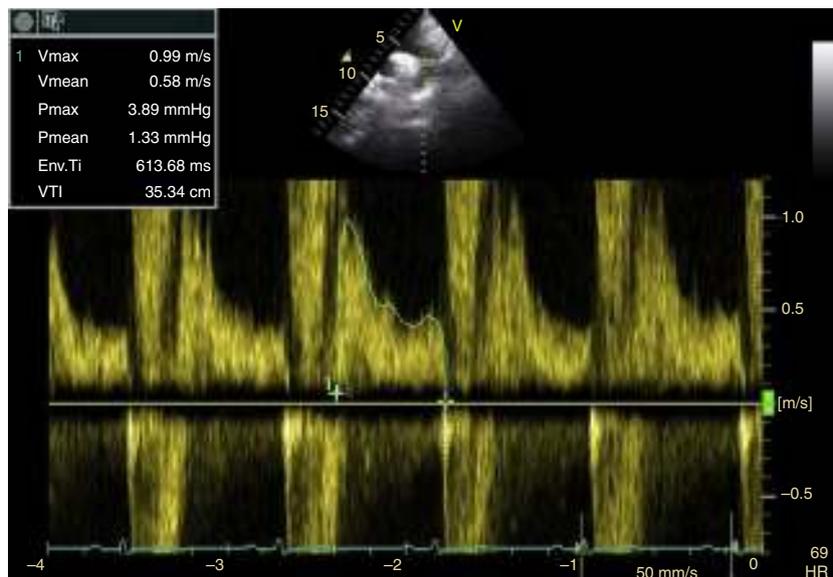


Figure 4 Holodiastolic flow reversal in the descending thoracic aorta indicative of significant aortic valve regurgitation.

Aneurysm of the anterior mitral valve leaflet due to the regurgitant flow of AR is a plausible mechanism in the absence of evidence for endocarditis.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Conflicts of interest

The authors have no conflicts of interest to declare.

Appendix A. Supplementary material

Supplementary material associated with this article can be found in the online version at [doi:10.1016/j.repc.2015.10.008](https://doi.org/10.1016/j.repc.2015.10.008).