A mitral valve aneurysm: A rare complication of aortic valve endocarditis

Mohammed Tribak[1], Yassine El Mourabit[2], Omar Ech-Cherif El Kettani[2], Youssef Saadouni[2], Christ-Marion Adanho[2], Lalla Hasna Leghlimi[3], Nesma Bendagha[4], Aida Soufiani[4], Zineb Agoumy[5], Samah El-Mhadi[5], Lahcen Marmade[6], Said Moughil[6]

From [1]Assistant Professor, Department of Cardiovascular Surgery "B", [2]Resident, Department of Cardiovascular Surgery "B", [3]Assistant Professor, Department of Cardiovascular Anesthesia "B", [4]Assistant Professor, Department of Cardiology "A", [5]Resident, Department of Cardiology "A", [6]Professor, Department of Cardiovascular Surgery "B", Ibn Sina University Hospital, Rabat, Morocco

A 40-year-old male with no past medical history of rheumatism or valvular heart disease presented to our cardiology department with dyspnea and fever that had been evolving for 2 weeks. 1 month before, he had undergone a dental extraction. On examination, his hemodynamic state was stable; there was a positive Harzer sign, a diastolic murmur along the left sternal border, and a systolic murmur at the mitral and tricuspid sites. A transthoracic and transesophageal echocardiography revealed a bicuspid aortic valve; the right coronary cusp was prolapsed and twice perforated without vegetation; and the presence of two aneurysms on the anterior mitral leaflet, one of which was perforated (Figs. 1 and 2). The mitral and aortic insufficiencies were both evaluated as Grade III, and the global cardiac function was correct. The *Streptococcus viridans* was isolated from blood cultures, and the patient was treated with antibiotic therapy for 4 weeks because he was stable hemodynamically and controlled for sepsis. The patient underwent surgery (Fig. 3) with mitral and aortic valve replacements using mechanical prostheses. Mid-term follow-up was satisfactory, with no signs of recurrent infection.

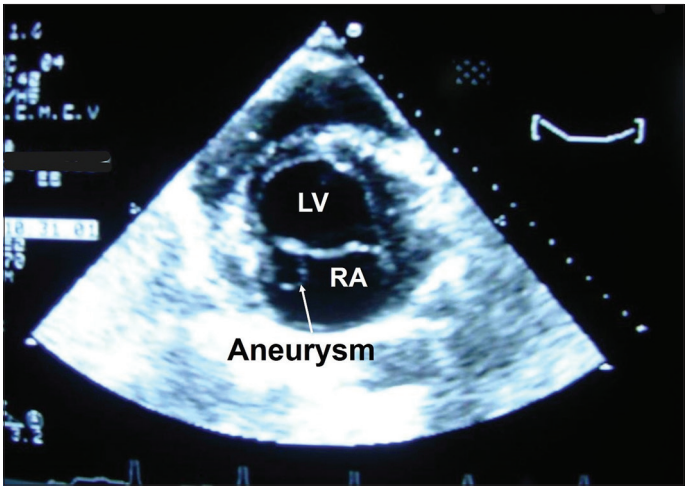

Figure 1: Transthoracic echocardiography, small axis parasternal view showing the anterior mitral leaflet aneurysm. LV: Left ventricle; RA: Right atrium

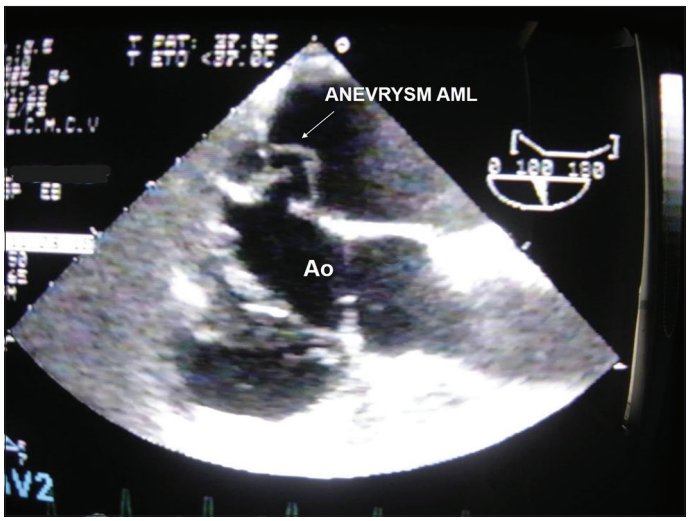

Figure 2: Transesophageal echocardiography, 100° view showing the aneurysm of the anterior mitral leaflet. Ao: Aorte

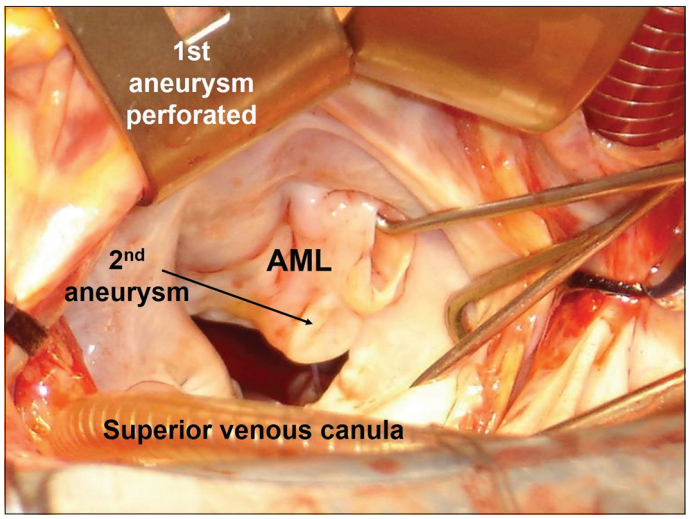

Figure 3: Per-operative view of the mitral valve, perforated of the aneurysm of anterior mitral leaflet, AML: Anterior mitral leaflet

Access this article online	
Received - 25 June 2024 Initial Review - 10 July 2024 Accepted - 05 August 2024	Quick Response code
DOI: 10.32677/ijcr.v10i10.4697	

Correspondence to: Mohammed Tribak, Lotissement Walladia, No. 40, Rabat - 10800, Morocco. E-mail: tribakmed@yahoo.fr

Mitral valve aneurysms are rare, with an incidence of 0.2–0.3% on echocardiographic examinations in general [1,2]. The probable mechanism of its formation is the destruction of the aortic valve, which results in regurgitant jet lesions that strike the anterior leaflet of the mitral valve, creating a secondary site of infection and leading to the development of an aneurysm [3]. This case highlights the fact that infective endocarditis is the most common cause of valvular aneurysms and emphasizes that this diagnosis must be suspected even in the absence of vegetation on echocardiography, as the aneurysm may rupture and cause severe mitral regurgitation or be missed at the time of aortic valve replacement.

ACKNOWLEDGMENT

The authors acknowledge gratitude to the patient.

REFERENCES

1. Tomsic A, Li WW, Van Paridon MW, Bindraban NR, De Mol BA. Infective endocarditis of the aortic valve with anterior mitral valve leaflet aneurysm. Tex Heart Inst J 2016;43:345-9.
2. Uematsu S, Ashihara K, Tomioka H, Takagi A. Large mitral valve aneurysm with infective endocarditis. BMJ Case Rep 2015;2015:bcr2014209092.
3. Azevedo O, Ferreira F, Guardado J, Durães C, Quelhas I, Pereira A, *et al*. Mitral and aortic valve aneurysms secondary to infective endocarditis: Impressive images of a rare echocardiographic finding. Eur J Echocardiogr 2010;11:E28.

Funding: Nil; Conflicts of interest: Nil.

How to cite this article: Tribak M, El Mourabit Y, El Kettani OE, Saadouni Y, Adanho CM, Leghlimi LH, *et al*. A mitral valve aneurysm: A rare complication of aortic valve endocarditis. Indian J Case Reports. 2024;10(10):334-335.