CLINICAL IMAGE

A very rare location of the mitral valve abscess

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A 64-year-old man with a history of alcohol abuse was admitted to the hospital because of fever, weakness, and back pain. During the initial diagnostic evaluation, all 3 blood cultures were positive for methicillin-sensitive *Staphylococcus aureus* and *Streptococcus vestibularis*. Further tests for suspected endocarditis involved transesophageal echocardiography (TEE), which showed a rounded, bilobular, hyperechogenic mass localized at the tips of both, anterior and posterior, mitral leaflets (FIGURE 1A and 1B). Moreover, mild to moderate mitral insufficiency was present. No signs of heart failure or systemic embolism were identified. Intravenous antibiotics (ceftriaxone and gentamycin) were started according to the guidelines.[1] Subsequent diagnostic work-up for the source of bacteremia in this patient additionally revealed vertebral osteomyelitis at L1 with abscess in the adjacent right psoas muscle. Following cardiosurgical, orthopedic, and neurosurgical consultations, a conservative treatment with intravenous antibiotics was recommended to be continued. A follow-up TEE performed one week later demonstrated the disruption of the mitral mass with a decrease in its volume and the presence of a single highly mobile structure consistent with vegetation (FIGURE 1C and 1D). There was no increase in the degree of mitral insufficiency, clinical signs of heart failure, or embolism. The next TEE performed after one week (2 weeks after the initiation of antibiotics) revealed almost complete resolution of the mitral mass, without embolic complications or any significant increase in mitral insufficiency, including no signs of perforation of the mitral leaflets (FIGURE 1E and 1F). However, progressive vertebral destruction led to localized spinal cord compression requiring subsequent neurosurgical treatment.

Prevalence of infective endocarditis in patients initially diagnosed with infective spondylodiscitis, and systematically evaluated with TEE is high, reaching up to 30%, and is associated with a significantly worse prognosis.[2] In this patient, an initial echocardiographic assessment (normal left ventricular and atrial size, mild central mitral regurgitation) suggested no valvular predisposition for infective endocarditis. This underscores the high risk for infection of normal native valves during persistent, significant bacteremia from different sites, like in our patient with infective spondylodiscitis.[1] It is unclear whether the polymicrobial character of bacteriemia in this patient contributed to the increased risk of endocardial involvement. However, based on the data from the literature, polymicrobial bacteremia with presence of *S. aureus* and a variety of clinical manifestations is generally associated with a worse prognosis and higher mortality compared with monomicrobial staphylococcal bacteremia only.[3,4]

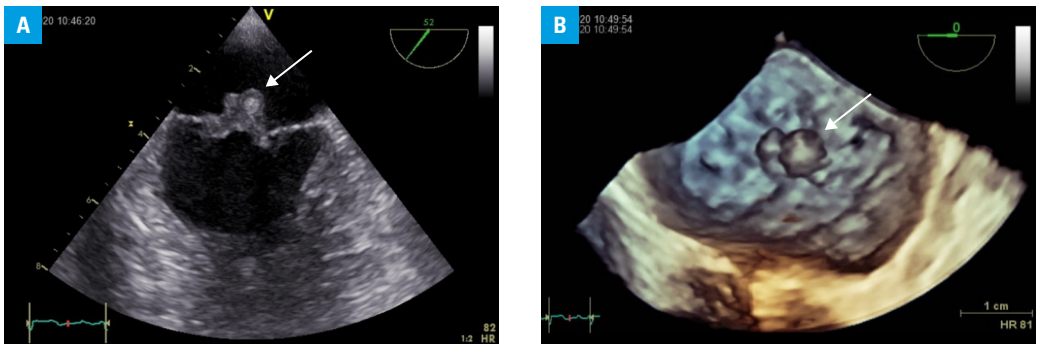

FIGURE 1 Mitral leaflet abscess (arrows) visible on 2-dimensional transesophageal echocardiography in a midesophageal commissural view (52° rotation; A) and on 3-dimensional transesophageal echocardiography in a modified atrial view (B)

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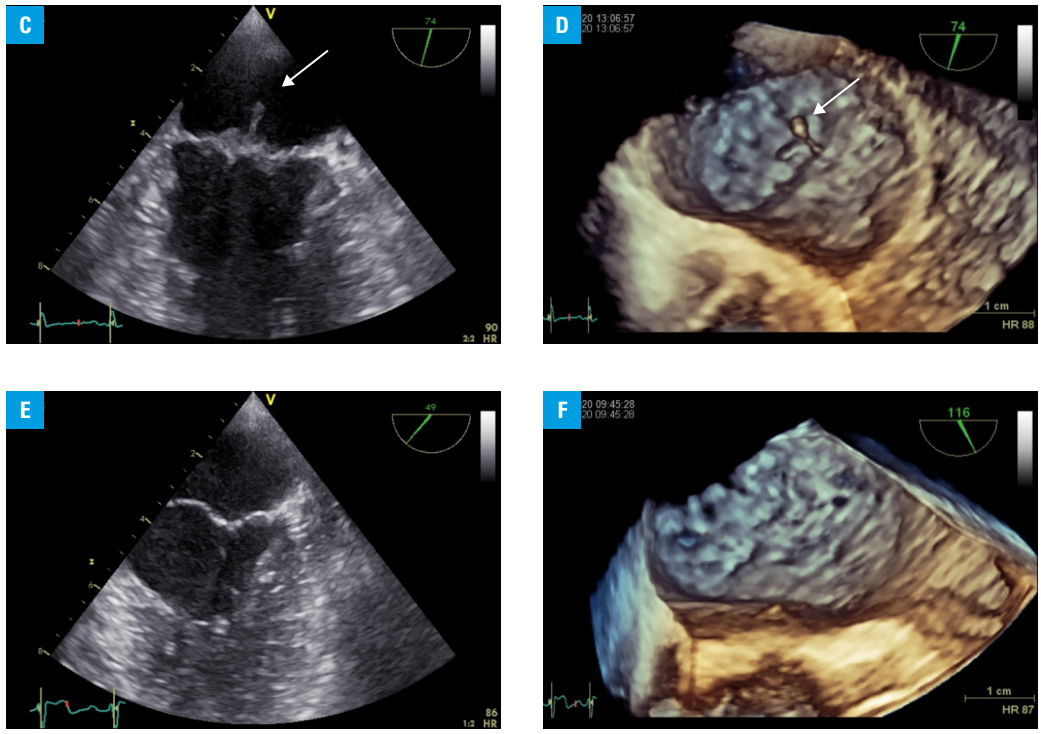

FIGURE 1 **C**, **D** – respective images performed 1 week later showing the abscess (arrows); **E**, **F** – respective images performed 2 weeks later with almost complete resolution of the mass

Concluding, mitral valve abscess is a well-known and severe complication of infective endocarditis, often requiring surgical treatment. However, the most typical localization is postero-lateral annulus or mitral-aortic curtain at the base of the anterior leaflet in aortic valve endocarditis.[1] In this case, we describe an infrequent, in our experience, example of the abscess on the free margins of the mitral leaflets, with its favorable resolution during intravenous treatment with 2 antibiotics. A superficial nodular morphology of the abscess may suggest its early stage of development, not yet complicated by localized mitral leaflets destruction.

ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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