

Mitral valve pseudoaneurysm – missed acute phase endocarditis case report

Blanka Glavaš Konja*,
Vlatka Lukšić Rešković,
Irena Ivanac Vranešić,
Majda Vrkić Kirhmajer,
Zvonimir Ostojić,
Marija Mance,
Jelena Hucika,
Jurica Šalković,
Joško Bulum,
Martina Lovrić Benčić,
Jadranka Šeparović Hanževački

University of Zagreb School of Medicine, University Hospital Centre Zagreb, Zagreb, Croatia

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***ADDRESS FOR CORRESPONDENCE:** Branka Glavaš Konja, Klinički bolnički centar Zagreb, Kišpatičeva 12, HR-10000 Zagreb, Croatia. / Phone: +385-1-2367-490 / E-mail: blanka.glavas@gmail.com

ORCID: Branka Glavaš Konja, <http://orcid.org/0000-0003-1134-4856> • Vlatka Rešković Lukšić, <http://orcid.org/0000-0002-4721-3236> • Irena Ivanac Vranešić, <https://orcid.org/0000-0002-6910-9720> • Majda Vrkić Kirhmajer, <https://orcid.org/0000-0002-1340-1917> • Zvonimir Ostojić, <http://orcid.org/0000-0003-1762-9270> • Marija Mance, <http://orcid.org/0000-0003-1542-2890> • Joško Bulum, <http://orcid.org/0000-0002-1482-6503> • Martina Lovrić Benčić, <http://orcid.org/0000-0001-8446-6120> • Jadranka Šeparović Hanževački, <http://orcid.org/0000-0002-3437-6407>

Case report: 26-year-old patient with a systemic lupus erythematosus diagnosed a year ago was hospitalized because one day temperature without a concomitant increase in inflammatory laboratory parameters. At admission, the transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE) showed pseudoaneurysm of the anterior mitral cusps (**Figure 1**, and **Figure 2**). Blood cultures at admission, as well as those sampled later, were all negative. One year earlier, the patient was hospitalized for febrile pancytopenia and *Staphylococcus aureus* septicemia. Diagnostics confirmed normal hematopoiesis but revealed systemic lupus erythematosus. Echocardiography performed early during the first hospitalization was normal (**Figure 3**). Antibiotic therapy was initiated. Blood culture test became negative without expected clinical recovery, so corticosteroid therapy was added. After three weeks of treatment, the patient was released home cured. Corticosteroid therapy was terminated after a gradual dose reduction. The patient felt well until the second hospitalization. Endocarditis was not confirmed during the second hospitalization, suggesting the sterile mitral valve

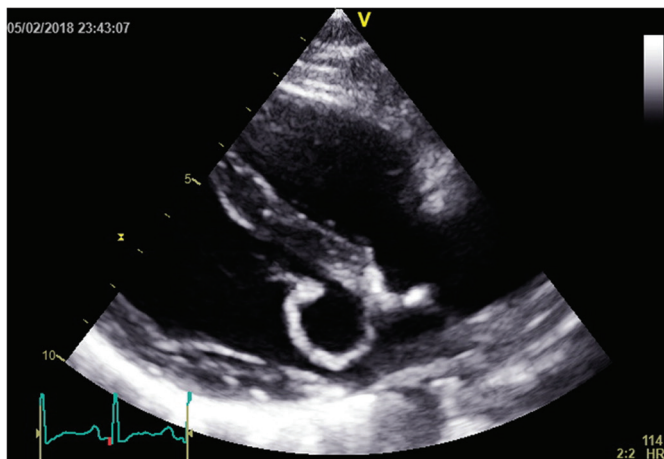


FIGURE 1. Transthoracic echocardiography: mitral valve pseudoaneurysm (long axis view).

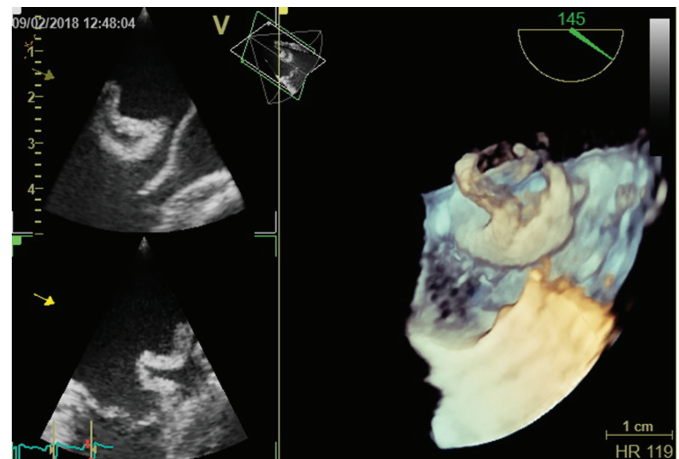


FIGURE 2. Three-dimensional transesophageal echocardiography: mitral valve pseudoaneurysm.

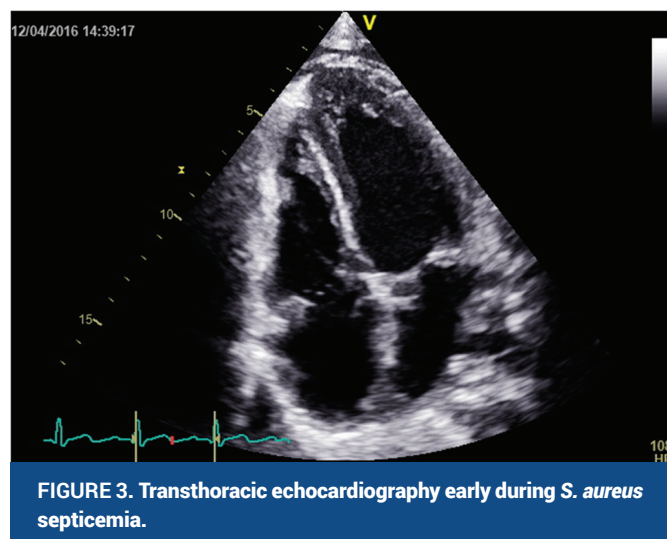
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pseudoaneurysm. Because of the potential risk for further deformation and mitral valve rupture, surgical valve reparation was suggested and done without complications.

Discussion: Infectious endocarditis is a challenging disease. Echocardiography is the basic imaging method, especially in the circumstances of the high clinical suspicion based on Duke's criteria¹. In the case of native valves, the sensitivity of TEE is 90 to 100%, and specificity 90% in the detection of vegetation, perforation or fistula². In the detection of paravalvular abscesses, the sensitivity of TEE is 80-90% and of TTE is only 36-50%, or even less for small abscesses³. In the case of a negative echocardiographic finding and high clinical suspicion of endocarditis, TTE / TEE should be repeated 5-7



days later, in the case of *S. aureus* infection even earlier⁴. A repeated negative study should virtually rule out the diagnosis. This case highlights the importance of two echocardiographic examinations at least seven days apart if there is a doubt about endocarditis, especially in the presence of *S. aureus* infection as it was the case.

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