

Hemoadsorption as adjunctive therapy in patients with infective endocarditis of the aortic valve: a case report

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Introduction: Infective endocarditis (IE) is a disease that is continually changing, with new high risk patients, new diagnostic procedures, the involvement of new microorganisms, and new therapeutic methods. Patients with IE are at high risk of developing an excessive systemic hyperinflammatory state, resulting in systemic inflammatory response syndrome and septic shock. Hemoadsorption by cytokine adsorbers has been successfully applied to remove inflammatory mediators and may represent a potential approach to control the hyperinflammatory systemic reaction associated with the surgical procedure itself and subsequent clinical conditions by reducing a wide range of immunoregulatory mediators.^{1,2}

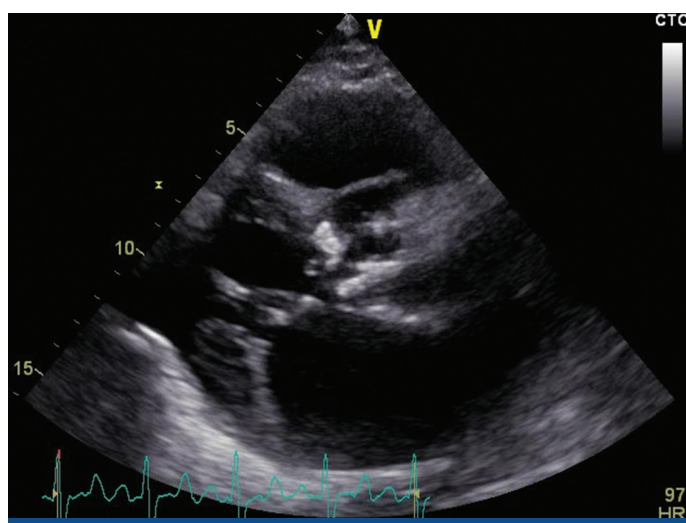


FIGURE 1. Transthoracic echocardiography showing extensive vegetation of the aortic valve.

Case report: 60-year-old male with history of asymptomatic, moderately severe aortic stenosis of the bicuspid aortic valve, was hospitalized for respiratory insufficiency and fever. Two months ago, he was treated on an outpatient basis for occasional febrility in the evening and urinary tract infections. Echocardiographic analysis showed endocarditis of the aortic valve, with the development of a paravalvular abscess, and severe aortic regurgitation (**Figure 1**). Considering the severe general condition of the development of multi organ failure as part of sepsis, the patient was started with continuous renal replacement therapy using a modified membrane (oXiris) capable of adsorption that can reduce the level of endotoxin and cytokine with regional citrate anticoagulation, after which patient underwent emergency cardiac surgery, aortic valve was replaced, due to involvement of the anterior mitral cusps, the mitral valve was also replaced.

Conclusion: Modalities in the approach to the treatment of IE continue to represent a challenge due to the high mortality of patients, which is why the application of the hemadsorption opens the possibility of preoperative stabilization of patients. Appropriate selection criteria are needed for a more targeted application of hemoadsorption therapy.

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LITERATURE

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