Prosthetic mechanical valve endocarditis: a case report

Denis Mačkić*, **Faruk Čustović**, **Edin Begić**

General Hospital "Prim.dr. Abdulah Nakaš", Sarajevo, Bosnia and Herzegovina

KEYWORDS: endocarditis, abscess, heart valve.

CITATION: Cardiol Croat. 2022;17(9-10):239. | https://doi.org/10.15836/ccar2022.239

***ADDRESS FOR CORRESPONDENCE**: Denis Mačkić, General Hospital "Prim.dr. Abdulah Nakaš", Kranjčevićeva 12, 71000 Sarajevo, Bosnia and Herzegovina. / Phone: +387 33 285-100 / E-mail: denismackic@hotmail.com

ORCID: Denis Mačkić, https://orcid.org/0000-0001-6540-4944 • Faruk Čustović, https://orcid.org/0000-0001-7254-8858 Edin Begić, https://orcid.org/0000-0001-6842-262X

Aim: The aim of article was to present a patient with heart failure symptoms caused by prosthetic mechanical valve endocarditis.

Case presentation: 44-years-old male patient was admitted because of dyspnea and swelling of lower extremities. The patient is a long-standing heroin addict who had an aortic valve replacement done 8 years ago due to endocarditis. The implanted valve was a mechanical aortic valve – Edwards MIRA bi-leaflet valve No 32 (Edwards Lifesciences; Irvine, California). He also was already diagnosed with hepatitis C years before. At admission the patient had heart failure signs with sinus tachycardia on the electrocardiogram. During physical examination a metallic click of the mechanical aortic valve was heard on stethoscope along with a diastolic murmur on the precordium with a *punctum maximum* above the aortic valve. Large pretibial edemas on both legs were present also. In laboratory findings nonspecific inflammatory parameters were increased. On transthoracic echocardiography dilatation of all heart chambers was found. The left ventricular systolic function was moderately reduced (left ventricular ejection fraction of 42% by Simpson method), along with restrictive filling pattern. Hypoechoic mass along the right side of the mechanical aortic valve was noted measuring 3.57x1.03cm. On the artificial aortic valve a high degree, severe aortic regurgitation, was verified with pressure half time 133ms. Blood cultures were examined and showed no significant bacterial growth. At admission dual parenteral antibiotic therapy was ordered. On the 7th day of hospitalization the patient becomes hypotensive with signs of acute renal failure. Despite of the therapeutically measures that were taken patients clinical worsening progressed and lethal outcome was declared.

Conclusion: In this case even though aggressive parenteral antibiotic therapy was started, lethal outcome came due to several concomitant reasons. Paravalvular abscess of mechanical heart valves is a very serious complication with a high mortality rate. It is essential to recognize this type of pathology as early as possible, so aggressive parenteral antibiotic therapy could be started, while in many cases surgical reoperation is needed[1].

RECEIVED:
October 13, 2022

ACCEPTED:
November 10, 2022

LITERATURE

1. Gürtler N, Osthoff M, Rueter F, Wüthrich D, Zimmerli L, Egli A, et al. Prosthetic valve endocarditis caused by Pseudomonas aeruginosa with variable antibacterial resistance profiles: a diagnostic challenge. BMC Infect Dis. 2019 Jun 17;19(1):530. https://doi.org/10.1186/s12879-019-4164-3