

## A case of complicated infectious endocarditis with good outcome

U. Valentino U.<sup>1</sup>, E. Marrone<sup>1</sup>, L. Corbia<sup>2</sup>, V. Zanobbi<sup>2</sup>, F. Cinque<sup>1</sup>, A. Magliocca<sup>1</sup>, D. Morelli<sup>1</sup>, I. Saldamarco<sup>1</sup>, T. Ascione<sup>3</sup>, P. Morella<sup>1</sup>

<sup>1</sup>Internal Medicine Unit 3, Cardarelli Hospital, Naples

<sup>2</sup>School of Specialization in Geriatrics, Federico II University, Naples, Italy

<sup>3</sup>Infectious diseases Unit, Cardarelli Hospital, Naples

### Background

Infectious Endocarditis (IE) is an infection of the endothelium of the heart. It has an annual incidence of 3–10/100,000 of the population and it is associated with significant morbidity and higher mortality. *Staphylococcus aureus*, streptococci, and enterococci together account for 80–90% of all cases of endocarditis. Up to 8–10% of the cases the cultures are negative. The main lesions of IE are vegetations which cause emboli and destruction of valvular and/or perivalvular tissues leading to acute valvular regurgitations. Up to 50% of patients will require surgery for IE. We describe a case of complicated IE with heart failure, severe valve incompetence, cerebral embolism, and spondylodiscitis.

### Case report

A 52-year-old man with a medical history of hypertension was admitted to the emergency department for acute confusion and low back pain. On arrival, the patient was afebrile (36.7°C), with a heart rate of 85 beats per minute, blood pressure of 120/60 mmHg, and oxygen saturation of 99% on room air. The Brain CT was negative for hemorrhagic brain lesions. Cerebrospinal fluid analysis was carried out to exclude meningeal pyogenic infection. It unveiled elevated proteins, normal glucose and a lymphocytic-predominant pleocytosis. Cerebral magnetic resonance

imaging (MRI) revealed multiple acute embolic infarctions and not an encephalitis while lumbar spine MRI showed lumbar spondylodiscitis. A large vegetation of 2.6\*0.9 cm at the posterior mitral valve leaflet was found on transthoracic echocardiography. Only one blood culture was positivity for coagulase-negative *Staphylococcus*. CT-guided biopsy was performed for the diagnosis of spondylodiscitis without confirmation of the infection. Because patient presented complicated IE with heart failure, cerebral embolism, and spondylodiscitis of unidentified origin an antibiotic therapy with meropenem, linezolid and daptomycin was prescribed with good outcome. He was anticoagulated. The patient's neurological deficits improved during hospital stay and four weeks later for treatment of severe heart failure a surgical mitral replacement was planned.

### Conclusion

Symptomatic neurological complications occur in 15–30% of patients with IE and they are associated with a severe neurologic disability and higher mortality. Then cerebral complications make the timing of cardiac surgery difficult. A multidisciplinary assessment of complicated IE, involving cardiologists, cardiac surgeons, Infectologist, and neurologists, is recommended to enable the correct treatment pathways to be accessed and to reduce complication and mortality rates.