

## ■ Acute myocarditis and heart failure: a rare complication of rickettsiosis

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**Introduction:** Myocarditis is a rare but serious complications of tick-borne infections, particularly those caused by *Rickettsia rickettsii* and *Rickettsia conorii*.<sup>1,2</sup>

**Case report:** 32-year-old patient presented to the Emergency Department due to shortness of breath and exercise intolerance. He reported an erythematous skin rash and swelling of his right ankle. In the physical status, a hyperemic pharynx and petechiae on the soft palate were described. Heart rate was tachyarrhythmic and a holosystolic murmur was present. The electrocardiogram showed a rapid form of atrial fibrillation. Laboratory showed elevated troponin and NT-proBNP levels. Echocardiography showed a dilated left ventricle, severely reduced ejection fraction (LVEF 15%, GLS -2.2%) and mitral valve annulus dilatation with consequent severe mitral regurgitation. Synchronized cardioversion was performed and sinus rhythm was achieved. Due to hypotension, inotropic support with dobutamine was started. A cardiac magnetic resonance imaging was performed, which confirmed biventricular cardiomyopathy and described a non-ischemic zone of fibrosis. Because of the amnesic information on rash and swelling of the ankle, a microbiological testing was performed, which revealed a positive finding of IgM antibodies to *Rickettsia conorii* and *Rickettsia typhi*. An infectious disease specialist was consulted, and it was established that the patient had been in contact with people who were in an area with a known endemic rickettsia infection. Doxycycline was administered for 14 days. Two months after the first presentation of heart failure NT-proBNP values were normal. Echocardiography showed a marginally dilated left ventricle with an ejection fraction of 55% and a mild mitral regurgitation.

**Conclusion:** In myocarditis, patients usually develop tiredness, chest discomfort and dyspnoea which may progress to cardiogenic shock or development of arrhythmias. If timely diagnosed myocarditis caused by rickettsiosis is treatable with favorable outcomes.

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## LITERATURE |||||||

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