

# Fulminant myocarditis: a critical and urgent diagnosis with serious prognostic implications: a case report

 Petra Taboršak\*,  
 Ana Marinić

University Hospital Centre  
Zagreb, Zagreb, Croatia

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**\*ADDRESS FOR CORRESPONDENCE:** Petra Taboršak, Klinički bolnički centar Zagreb, Mije Kišpatića 12, HR-10000 Zagreb, Croatia. / Phone: +385-99-4323-340 / E-mail:

**ORCID:** Petra Taboršak, <https://orcid.org/0009-0002-2016-5868> • Ana Marinić, <https://orcid.org/0000-0002-9349-8172>

**Introduction:** Fulminant myocarditis is a rapidly progressive inflammatory disease of the myocardium, which consists of cardiac muscle cells responsible for cardiac contractions and is among the leading causes of sudden cardiac death in young people. Patients are in poor general condition, hemodynamically unstable and require urgent care. Fulminant myocarditis can quickly progress to multi-organ failure.<sup>1,2</sup> This paper presents a case of fulminant myocarditis of most likely viral origin, followed by a picture of cardiogenic collapse.

**Case report:** 19-year-old female patient reported to the Emergency Department due to nausea, vomiting, lack of appetite and fever up to 39°C. The laboratory findings showed moderately elevated inflammatory parameters with significantly elevated cardioselective enzymes and signs of heart failure. Cardiac ultrasound revealed impaired heart function (left ventricular ejection fraction 35%). The condition rapidly deteriorated in the manner of fulminant myocarditis, and despite intensive pharmacological support, there was a cardiac arrest. During cardiopulmonary resuscitation, a veno-arterial extracorporeal membrane oxygenation (ECMO) was established as a bridge to further treatment strategies. The course of treatment was complicated by the development of 'ECMO lung,' and an Impella CP device. Along with Impella and inotropic support, the patient's hemodynamic stability was monitored and V-A ECMO was soon removed using a surgical technique, but only minimal recovery of cardiac function was monitored. Finally, the left ventricular assist device (LVAD) pump is left placed, with which the patient is hemodynamically stable. The course of hospitalization was complicated by multiple infectious events in the form of sepsis and multiple pleural effusions. Throughout the entire hospitalization, a holistic approach was used with the daily psychological and pharmacological support and nutrition counseling, which was one of the leading obstacles which needed to be overcome. After 6 months of hospitalization, the patient is discharged home in good general condition.

**Conclusion:** Fulminant myocarditis is one of the leading causes of acute heart failure in young people. The complexity of care for patients with fulminant myocarditis cannot be overstated. Nurses must coordinate multidisciplinary teams, administer intricate treatment regimens, and provide emotional support to patients and their families. Their expertise in managing mechanical circulatory support devices, such as ECMO and LVADs, is vital to improving patient outcomes.

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## LITERATURE

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