

## Ventricular fibrillation storm – a case report

 **Ivica Benko**<sup>1,2\*</sup>,  
 **Mateja Lovrić**<sup>1</sup>,  
 **Marina Žanić**<sup>1</sup>,  
 **Marina Budetić**<sup>1</sup>,  
 **Nikolina Slamek**<sup>1</sup>,  
 **Mirela Adamović**<sup>1</sup>,  
 **Ružica Lovrić**<sup>1</sup>,  
 **Ana-Maria Goronić**<sup>1</sup>,  
 **Mario Tomašević**<sup>1</sup>,  
 **Ivan Horvat**<sup>1</sup>

<sup>1</sup>Dubrava University Hospital,  
Zagreb, Croatia.

<sup>2</sup>University of Applied Health  
Sciences, Zagreb, Croatia.

**KEYWORDS:** ventricular fibrillation storm, catheter ablation, ischemic cardiomyopathy, nursing care, critical arrhythmia management.

**CITATION:** *Cardiol Croat.* 2025;20(11-12):300. | <https://doi.org/10.15836/ccar2025.300>

**\*ADDRESS FOR CORRESPONDENCE:** Ivica Benko, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-1-2902-545 / E-mail: [ibenko@kdb.hr](mailto:ibenko@kdb.hr)

**ORCID:** Ivica Benko, <https://orcid.org/0000-0002-1878-0880> • Mateja Lovrić, <https://orcid.org/0000-0003-1457-6521>  
Marina Žanić, <https://orcid.org/0000-0001-5123-8586> • Marina Budetić, <https://orcid.org/0000-0002-1165-7097>  
Nikolina Slamek, <https://orcid.org/0000-0002-2975-8793> • Mirela Adamović, <https://orcid.org/0000-0003-4922-7436>  
Ružica Lovrić, <https://orcid.org/0000-0002-8991-5025> • Ana-Maria Goronić, <https://orcid.org/0009-0005-7767-7575>  
Mario Tomašević, <https://orcid.org/0000-0003-0931-9272> • Ivan Horvat, <https://orcid.org/0000-0002-0480-7341>

**Introduction:** Ventricular fibrillation (VF) storm is a life-threatening condition characterized by recurrent malignant ventricular arrhythmias often refractory to antiarrhythmic therapy. Despite optimal revascularization and pharmacological management, this entity remains a major therapeutic challenge requiring urgent multidisciplinary action<sup>1</sup>.

**Case report:** We present a 58-year-old male with recent anterior ST-elevation myocardial infarction treated with percutaneous coronary intervention of the left anterior descending artery, admitted after out-of-hospital cardiac arrest due to ventricular fibrillation (VF). During the following days, recurrent VF storm occurred, necessitating >150 defibrillations despite intravenous amiodarone, lidocaine, beta-blockers and electrolyte optimization. The patient required deep sedation, mechanical ventilation and hemodynamic support. Urgent electrophysiological study with 3D electroanatomical and intracardiac echocardiography-guided mapping revealed apical scar substrate. Catheter ablation of triggering premature ventricular complexes was performed with transient rhythm stabilization. Subsequent course was complicated by sepsis, acute renal failure requiring dialysis and multi-organ dysfunction. After prolonged intensive care, tracheostomy and gradual recovery, left ventricular ejection fraction improved from 20% to 35%. The patient was weaned from mechanical ventilation and transferred to a regional hospital for further treatment.

**Conclusion:** VF storm represents an extreme medical emergency with high mortality. Successful management requires rapid recognition, advanced interventional strategies such as catheter ablation, and coordinated intensive care. This case emphasizes the crucial role of highly trained nurses across the continuum of care, from intensive cardiac units to electrophysiology laboratories, whose expertise and timely interventions are essential in stabilizing patients during the most stressful and life-threatening arrhythmic scenarios.

**RECEIVED:**  
October 1, 2025

**ACCEPTED:**  
October 22, 2025



### LITERATURE

1. Muser D, Santangeli P, Liang JJ. Management of ventricular tachycardia storm in patients with structural heart disease. *World J Cardiol.* 2017 Jun 26;9(6):521-530. <https://doi.org/10.4330/wjc.v9.i6.521>