







Ventricular tachycardia storm leading to heart transplantation – a case report

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KEYWORDS: ventricular tachycardia storm, ischemic cardiomyopathy, ablation, heart transplantation, nursing.

CITATION: *Cardiol Croat.* 2025;20(11-12):280. | <https://doi.org/10.15836/ccar2025.280>

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Introduction: Ventricular tachycardia (VT) storm represents one of the most challenging entities in invasive arrhythmology. In patients with advanced ischemic cardiomyopathy and multiple ablation attempts, refractory VT can necessitate advanced heart failure therapies including transplantation¹.

Case report: 65-year-old male with ischemic cardiomyopathy, history of myocardial infarction, multiple coronary interventions, and ICD implantation was admitted with sustained VT. Despite repeated catheter ablations (2023, Feb 2025, May 2025), recurrent polymorphic VT persisted. During the last procedure, multiple inducible VTs were documented, including unstable morphologies resistant to ablation. Hemodynamic compromise required advanced support and multidisciplinary discussion. Right heart catheterization confirmed elevated filling pressures and reduced cardiac index (2.3 L/min/m²). Owing to recurrent VT storm, severely reduced LV function (EF ~30%), and aneurysmatic remodeling, the patient was referred for urgent transplant evaluation. Comprehensive pre-transplant screening (dental, dermatological, urological, infectious, psychiatric) revealed no contraindications. On 13 June 2025, urgent orthotopic heart transplantation with ICD extraction was performed. The postoperative course was uneventful; the patient was weaned early from ventilation, mobilized within days, and later discharged on triple immunosuppressive therapy. Follow-up myocardial biopsies demonstrated no significant rejection (ISHLT 0–1R).

Conclusion: This case illustrates the complexity of VT storm in end-stage ischemic cardiomyopathy and the ultimate role of heart transplantation. Successful management required coordinated work of arrhythmia specialists, heart failure cardiologists, intensivists, cardiac surgeons, and highly skilled nursing teams across cardiology and cardiac surgery. Nurses were integral in arrhythmia monitoring, advanced device management, perioperative care, and post-transplant education, highlighting the multidimensional role of nursing in one of the most complex areas of contemporary cardiology.

RECEIVED:
September 26, 2025

ACCEPTED:
October 22, 2025



LITERATURE

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