

Challenges of nursing care in a patient with left ventricular assist device and ventricular arrhythmias: a case report

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Out of the 17million premature deaths (under the age of 70) due to noncommunicable diseases in 2019, 38% were caused by CVDs (cardiovascular disease).¹ In the case report, we describe 29-year-old male who is currently suffering from an advanced stage of left ventricular failure and consequently from ventricular arrhythmia. The first presentation of the disease was syncope in 2009 when he was admitted to local hospital. At that time echocardiography showed only slight of both dilatation of both ventricles, ejection fraction was preserved. Six years later the patient was readmitted to the local hospital, but this time with more advanced heart failure symptoms such as, fatigue, paroxysmal nocturnal dyspnea, and leg edema. His functional status deteriorated to NYHA (New York Heart Association) class III, and he as was referred to our center. Cardiac workup was performed including echocardiography, cardiac magnetic resonance, coronarography and right heart catheterization. Non ischemic, dilated cardiomyopathy was diagnosed probably caused by history of myocarditis. Besides optimal medical therapy, implantable cardioverter defibrillator (ICD) was implanted in primary prevention of sudden cardiac death. He responded well to therapy and there were no sustained arrhythmias detected on ICD follow up. In 2020 his status deteriorated again to NYHA class III/IV. During this heart failure hospitalization patient developed ventricular tachycardia and cardiogenic shock that required veno-arterial extracorporeal membrane oxygenation (VA ECMO) placement. Later, a left ventricular assist device (HEARTMATE III) was implanted. In 2021 patient had a few ICD discharges due to ventricular tachycardia (VT). At that time, whole pre-transplant workup was performed, and patient was placed on elective heart transplant list. In mid-2022 patient developed ventricular tachycardia storm; therefore, amiodarone was introduced. Despite beta blocker and amiodarone therapy VT storm recurred and he was admitted back to Coronary Care Unit. Antiarrhythmic therapy did not have beneficial effect. Therefore, an electrophysiological study was performed and endocardial ablation which was only partly successful. Due to uncontrolled arrhythmia patient was accepted to hi urgent heart transplant list. Nursing care encompasses a wide range of knowledge and skills that are needed to provide the best plan of care for a patients with advanced heart failure and arrhythmias.

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LITERATURE

1. Cardiovascular diseases (CVDs) [cited 03 November 2022]; World health organization [internet]; Available from: [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))