From ablation to heart transplantation: a case report

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University Hospital Centre Zagreb, Zagreb, Croatia **KEYWORDS:** ventricular tachycardia, heart failure, implantable cardioverter defibrillator, stereotactic body radiation therapy

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Introduction: For patients with ischemic cardiomyopathy with reduced ejection fraction (<35%) in the line of primary prevention ICD (implantable cardioverter defibrillator) implantation is indicated. If patients have appropriate ICD shocks for sustained ventricular tachyarrhytmias catheter ablation is recommended. Nearly 1 in 5 patients are readmitted after first RF ablation of scar related ventricular tachyarrhytmias. Stereotactic body radiation therapy (SBRT) is promising therapy for ventricular tachycardia refractory to catheter ablation. SBRT significantly reduces ICD shocks in patients with advanced hearth failure. Last hope for patients with heart failure is heart transplantation. In University Hospital Centre Zagreb all types of treatment for heart failure patients is available and for the first time in Croatia this year we did stereotactic body radiation therapy which obviously was not "magic bullet" as the patients had recurrence of VT (ventricular tachycardia) and ICD shocks shortly after SBRT.

Case report: Male, 67 years old, ischemic cardiomyopathy due to myocardial infarction (1989 and 1999), quadruple bypass surgery (1999), ICD implantation (2020), upgrade to cardiac resynchronization therapy with defibrillator (2023), VT ablations x 2 (2023), SBRT (2023), heart transplantation and AAI (2023). After 2 subendocardial ablations and SBRT patients still had VT and ICD shock, shortly after last therapy he was readmitted to our center and got "new" heart.

Conclusion: Main goal of this case report is to show different ways of treatment for advanced heart failure. As technology advanced and more studies are done with SBRT (and other treatment options), there will be for sure new options for ischemic cardiomyopathy with reduced ejection fraction. For now despite all our hard work towards "escaping" heart transplantation it is for sure best option for patients with advanced heart failure such as patients in this case report.

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