






Radiofrequency catheter ablation of ventricular tachycardia in patients with structural heart disease – single-center outcomes in a ten year period

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Background: Ventricular tachycardia (VT) commonly occurs in patients with structural heart disease, either of ischemic or non-ischemic nature. Treatment options include various antiarrhythmic drugs (AADs) and implantable cardioverter-defibrillators (ICDs). When AADs fail, radiofrequency (RF) catheter ablation is a valuable treatment option for patients with recurrent VT.¹ This single-center ten-year retrospective study aimed to assess acute and chronic success rates of RF catheter ablation and to identify predictors of VT recurrence and patient survival.

Patients and Methods: We analyzed all consecutive patients with structural heart disease who underwent RF catheter ablation of VT in our institution from 2011 to 2021. Data were collected from existing hospital electronic medical records.

Results: A total of 72 patients (89% male, mean age 62 years, 28% with non-ischemic cardiomyopathy, mean LVEF 35%) were included. Non-inducibility was achieved in 64.7% of cases. One year VT recurrence rate was 41.6%. Substrate ablation significantly reduced the frequency of ICD shocks (14% vs. 60%, $p = 0.001$). The overall one-year survival was 86%. In multivariate analysis, VT inducibility was an independent predictor of VT recurrence ($p = 0.02$; OR = 13.5; 95% CI = 1.46-124.7). Female gender was an independent negative risk factor for patient survival ($p = 0.03$; OR = 7.19; 95% CI = 1.22-42.6).

Conclusion: Our data show that RF catheter ablation of VT can be a feasible treatment option for patients with frequent AAD-refractory VTs with acceptable acute and chronic success rates, even in mid-volume centers like ours. VT ablation can reduce the frequency of ICD shocks and improve patients' quality of life. Institutional registry can help monitor and improve outcomes and provide valuable feedback.

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LITERATURE

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