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Predictors of long-term mortality in patients undergoing ischaemic or non-ischaemic ventricular tachycardia ablation

Abstract: P806

Predictors of long-term mortality in patients undergoing ischaemic or non-ischaemic ventricular tachycardia ablation

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Background: Radiofrequency (RF) ablation is an effective treatment in patients with ventricular tachycardia (VT). There is remarkable clinical and scientific interest on identifying factors predicting outcome after VT ablation. Our aim was to determine predictors of long-term all-cause mortality in patients undergoing VT ablation at our Clinic.

Methods: Between 1st of January 2009 and 31st of December 2015 VT ablation was performed in 151 patients with sustained monomorphic VTs (125 men (83%), age 66 [57–74], EF 30% [20%-40%]). 69% of patients had ischaemic heart disease. During the procedure after activation and voltage mapping of the left ventricle (LV), substrate ablation and late potential elimination were performed. 13 patients underwent epicardial ablation (9%). Clinical, echocardiographic, procedural and follow up data was collected and analysed retrospectively. Ablation was considered successful, if during the follow period no re-ablation was needed.

Results: During the median follow up of 728 (331–1483) days 60 patients died (39.7%). Overall VT free survival was 67.5%. Re-ablation was performed in 16 patients (10.5%). During multivariate Cox analysis, after adjustment of relevant clinical covariates, amiodarone intake (HR: 0.45, CI: 0.24–0.85, p=0.01), more severe mitral regurgitation (HR: 1.44, CI: 1.05–1.97, p=0.02) and right ventricular function characterised by TAPSE (Tricuspid annular plane systolic excursion) (HR: 0.68, CI: 0.49–0.94, p=0.01) were independently associated with all-cause mortality. Kaplan-Meyer curves showed significantly lower survival in patients on Amiodarone treatment (p<0.001), deteriorated RV function, with TAPSE less, than 17mm (p=0.002) and severe MI (p<0.001).

Conclusion: VT is a potentially life threatening arrhythmia. Besides of ICD implantation ablation is an effective and safe treatment tool. Based on our results Amiodarone treatment, reduced RV function and more severe mitral regurgitation were independent predictors of long-term all-cause mortality.