Utility of Ischemic Testing Prior to Ablation for Sustained Monomorphic VT

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Introduction: Ischemic testing is frequently performed for patients presenting with sustained monomorphic ventricular tachycardia (SMVT). As SMVT is caused by scar and not active ischemia, the utility of ischemic testing is questionable. Our objective was to determine if ischemic testing prior to SMVT ablation impacts recurrent VT and post-ablation mortality.

Methods: Retrospective analysis was conducted of patients presenting for SMVT ablation at 2 quaternary care centers. VT recurrence and mortality rates were compared between patients who underwent ischemic testing within 30 days of their ablation (ischemic-pre) and those who did not (no ischemic) using Kaplan-Meier time to event analysis and Cox proportional hazard models.

Result: 164 patients underwent 188 ablations, with ischemic testing performed prior to ablation in 51 patients (31%). Of those 51 patients, 6 (12%) received revascularization prior to ablation. The median duration of follow-up was 271 days (IQR 117.5-653 days). Rate of VT recurrence did not differ between ischemic-pre (42%) and no ischemic groups (57%); log-rank P=0.120. Mortality was similar in both groups, with 15/113 (13%) deaths in ischemic-pre vs. 3/51 (6%) deaths in no ischemic group; log rank P=0.196. Neither recurrent VT or mortality was found on univariate Cox regression analysis to be predicted by pre-ablation revascularization or ischemic testing (HR 0.69, CI 0.43-1.11, P=0.12 for VT free-survival; HR 0.45, CI 0.13-1.56, P=0.21 for mortality).

Conclusion: Ischemic testing was found to have no significant effect on recurrent VT and post-ablation mortality.