

GW23-e2367

IDIOPATHIC RIGHT VENTRICULAR TACHYCARDIA AND PREMATURE VENTRICULAR CONTRACTIONS: ABLATION STRATEGY AND A FURTHER LOOK INTO PACE MAPS GUIDED BY NON-CONTACT MAPPING

doi:10.1136/heartjnl-2012-302920m.9

Fengxiang Zhang, Kejiang Cao. *Jiangsu Provence Hospital*

Objectives The spatial resolution between activation and pace mapping for idiopathic ventricular arrhythmia is still controversial. In this study, we further analysed pacemap spatial resolution and compare it to non-contact activation mapping.

Methods The earliest activation from unipolar based non-contact mapping can be classified as the earliest activation (EA) and the breakout (BO) sites. A total of 124 patients (mean age was 43.65 ± 12.74 years old) with 124 VT/PVCs, 36 male, were included in this study. A standard pace mapping at twice the diastolic threshold was applied at both EA and BO sites and the area of activated myocardium (EAA) and the area of captured myocardium (ECA) were measured based on activation and pace maps respectively. Initial ablation attempt was randomised at either the EA site or the BO site. If initial RF attempt failed, it would be followed by a crossover ablation.

Results The overall acute successful rate was 98.39% (122/124 VT/PVCs). Ablation was succeeded at the BO site in 40 (32.79%) VT/PVCs, and at the EA site in 82 (67.21%) VT/PVCs, $p < 0.01$. Pace score is similar between the EA and BO sites (22.98 ± 1.39 vs 22.68 ± 1.52 , $p = 0.47$). The ECA at 1 ms, and 5 ms was bigger than the corresponding EAA at the EA site ($4.58 \pm 3.97 \text{ cm}^2$ vs $0.03 \pm 0.13 \text{ cm}^2$, $8.34 \pm 4.36 \text{ cm}^2$ vs $0.95 \pm 1.41 \text{ cm}^2$, $p < 0.01$, respectively). Similarly, the ECA at 1 ms, and 5 ms was bigger than the corresponding EAA at the BO site ($5.69 \pm 5.17 \text{ cm}^2$ vs $0.75 \pm 0.50 \text{ cm}^2$, $10.89 \pm 5.08 \text{ cm}^2$ vs $8.31 \pm 4.97 \text{ cm}^2$, $p < 0.05$, respectively).

Conclusions Activation mapping provides better spatial resolution than pace mapping for identifying the origin of RVOT VT/PVCs.