Conclusions: Automatic qualitative analysis of intracardiac EGM signals can improve scar delineation and provides observer-independent identification of slow CCs within the scar tissue.

Acknowledgement/Funding: Funded by: TEC2013-42140-R, DPI2016-75458-R, TIN2011-28607 (MINECO), Grupo T 96 (DGA and FEDER), PI14/00759 (ISCIII and FEDER) and CIBER-BBN (ISCIII).

P797 | BEDSIDE

Relationship between wall thickness and post-infarction VT mechanisms: insights from registered CT imaging and ultra-high density VT mapping using the Rhythmia system


Introduction: The relationship between wall thickness and VT mechanisms in post-MI VT has not been thoroughly studied.

Methods: We studied 8 post-MI pts (57±15 yrs, 1 women) with available VT maps at ultra-high density using Rhythmia (median 8368 pts/map). Cardiac CT images were processed to derive maps of LV thickness. Anatomical channels were defined as channels of moderate thinning between 2 severely thinned areas. This substrate was registered to VT maps in Matlab software.

Results: Substrate was inferior in 3 pts, anterior in 3, lateral in 2. Total thinning area (i.e. <5mm) was 78±37cm², with an overlap with low bipolar voltage (i.e. <1.5mV) of 88.2±9.8%. In sinus rhythm, 365±207 LAVAs were identified, 66.2±14.5%, 18.1±14.4%, and 13.2±8.5% being distributed in moderate thinning, severe thinning, and non-thinned areas, respectively (P<0.05). 21 CT-channels were found (2.6±1.1pt), with mean length, width, and area of 21.9±8.7mm, 8.7±2.7mm, and 1.65±0.65cm², respectively. LV thickness was 3.4±0.6mm on channels center, and 1.9±0.3mm on the borders. A total of 10 VTs were mapped (mean cycle length 434±93ms). 10/10 of all critical isthmuses were observed on a CT-channel, while 10/21 (48%) of all CT-channels hosted a critical isthmus. CT-channels covered 4.9±2.1% of total low voltage area.

Conclusions: LV thickness by CT provides new insights into post-MI VT mechanism. CT-channels, defined as corridors of moderate thinning between 2 severely thinned areas, are promising targets for catheter ablation.

P797 | BEDSIDE

In which non-ischemic cardiomyopathies can the VCG identify those at risk for sustained ventricular tachycardia?

D. Cortez 1, A. Svensson 2, J. Carlson 1, P.G. Platnov 3. 1Lund University, Lund, Sweden; 2Linkoping University, Department of Cardiology and Department of Medical and Health Sciences, Linkoping, Sweden; 3Skane University Hospital, Arrhythmia Clinic, Lund, Sweden

Introduction: A higher spatial speaks QRS-T angle (SPQRS-T angle), an angle between the peak of the QRS and T-wave vectors in 3-dimensional space, correlates ventricular tachycardia risk in various patient populations including ischemic...