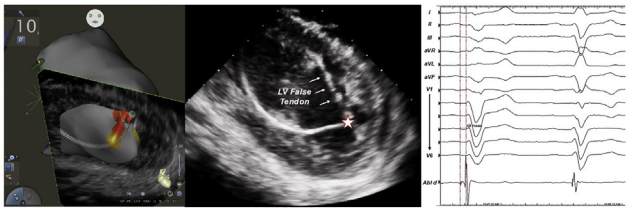
anterolateral and posteromedial PM and between the LV apex and the mid-septum. Purkinje potentials in sinus rhythm were recorded on the LV-FT at the VA target site in only 1 case. Acute ablation success was achieved in 15 (94%) patients (**Figure**). After a median follow-up of 1.5 years, the targeted LV-FT VA recurred in 4 (31%).
Conclusion: The LV-FT can be a rare site of origin of focal VAs or may contain critical circuit elements of scar-related VTs. Mapping and catheter ablation guided by ICE is successful in eliminating LV-FT VAs in most cases.



Catheter Ablation of Ventricular Arrhythmia Originating from Left Ventricular False Tendon

B-PO02-128

MAPPING AND ABLATION OF CONDUCTION CHANNELS IN THE ISCHEMIC VENTRICULAR SCAR USING RIPPLE MAPPING

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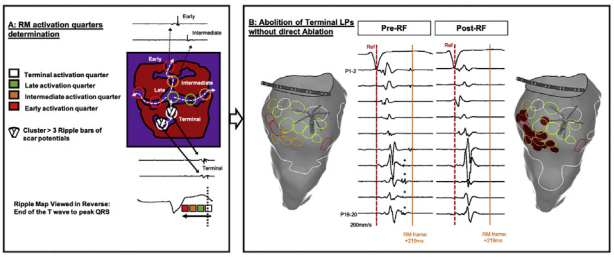
Background: Identifying conduction channels in ischemic scar by mapping local scar potentials is challenging. We developed a protocol to simplify this using Ripple Mapping (RM).
Objective: We tested the hypothesis that ablation of RM identified channel entrances could eliminate latest scar potentials without direct ablation.
Methods: High-density maps were collected using the Pentaray, during normal rhythm. Ripple Maps of the scar were viewed in reverse from the end of the T-wave to peak QRS to identify clusters of simultaneous potentials as >3 Ripple bars in close proximity. Clusters were encircled with design lines on the anatomy, colour coded to timing quarters (Figure 1A). Ablation was delivered at clusters of earliest scar potentials and the Pentaray used to monitor the effect on latest scar potentials.
Results: Eleven pts with post-infarct VT (mean age 68±6 yrs, EF 34±7%) were mapped with mean point density of 3050±1839. It was possible to eliminate latest scar potentials in all patients without direct ablation, shown in Figure 1B. Mean ablation time was 20.3 +/- 11.2 mins. VT was non-inducible following ablation in all patients. No recurrence was recorded during mean follow up of 10.1 +/- 7.4 months. Scar potentials ranged from 98.1±60.5ms to 214.8±89.8ms post QRS. Earliest potentials were present at the border, occupying 16.4% of scar. Latest potentials occupied 4.8% of scar, at the opposing border (45.5%) or core (54.5%). The precise activation pattern in channels was complex and harder to determine, consistent with the serpiginous conduction pathways described histologically.
Conclusion: We provide evidence of interconnected scar channels in the ischemic ventricular scar using RM.



B-PO02-129

AN EFFICIENT WORKFLOW TO INCREASE THE PRECISION OF NONINVASIVE RADIO-ABLATION OF VENTRICULAR TACHYCARDIA USING COMPUTERIZED ECG MAPPING AND RESPIRATORY GATING

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Background: Non-invasive stereotactic radiotherapy (SAbR) is an emerging therapy for refractory ventricular tachycardia. However, the precision of SAbR may be limited by respiratory motion, and the current workflow is time intensive.
Objective: We hypothesized that a strategy combining computerized 12-lead ECG mapping and respiratory-gated therapy may improve the efficiency and precision of SAbR and increase safety in inferior wall targets near the stomach.
Methods: Patients with refractory VT were retrospectively studied at 2 hospitals. VT exit sites were localized in 3D using a simulation-based computational ECG algorithm. Respiratory gated therapy was performed at end-expiration when respiratory motion ≥0.6 cm.
Results: In 6 patients (EF 29±13%), 4.2±2.3 VT morphologies/patient were mapped non-invasively; 100% of ECG-mapped sites colocalized to the same cardiac segment when compared with prior invasive mapping when available, requiring less time (33±12 vs 392±107 min, $p<0.01$). Respiratory gating correlated with smaller planning target volumes compared to non-gated patients (71±7 vs 153±35 cc, $p<0.01$). 2 patients had inferior wall targets close to the stomach (within 6mm) and had large respiratory motion (spanning 22mm), but no GI complications occurred with respiratory gating. ICD shocks decreased from 23±12 shocks/patient to 0.67±1.0 post-SAbR at 6±5 months follow-up ($p<0.001$, 97% relative reduction).
Conclusion: A novel non-invasive mapping and gating strategy improved workflow efficiency and significantly reduced ICD shocks. Protocol-guided use of respiratory gating delivered precise and safe therapy in patients with targets close to the stomach.

Figure. Novel ECG Mapping and Respiratory Gating Workflow