Conclusion: Utilizing ICE and 3-dimensional mapping in the absence of fluoroscopy is an effective and safe technique for VA ablation.

PO-635-07
EVALUATION OF A 3-DIMENSIONAL SUBSTRATE WITH WIDE BIPOLAR ELECTRODE SPACING IN ISCHEMIC SCARS
Naohiko Sahara and Keijiro Nakamura

Background: Wide bipolar interelectrode spacing can aid in estimating a 3-dimension substrate due to far-field potential sensing.

Objective: This study investigated the relationship between electrograms and myocardial wall thickness collected by wide bipolar interelectrode spacing and identified a heterogeneous scar within a dense scar.

Methods: Three of twenty-four consecutive cases of ventricular tachycardia ablation that met the following criteria were analyzed: (1) old myocardial infarction patients with a dense scar with wall thickness ≤2 mm and (2) patients with voltage maps created using HD Grid Mapping Catheter (Abbott Laboratories, Abbott Park, IL) during sinus rhythm. Along the usual 3 mm interelectrode bipolar spacing, voltage maps were made with 6 mm interelectrode spacing. Computed tomography images imported into the EnSite mapping system were merged with voltage maps (Figure 1A). Wall thickness was measured manually at each corresponding point in scar areas with wall thickness of 4 mm or less.

Results: Voltage amplitudes collected by 6 mm interelectrode spacing were more strongly correlated with wall thickness than those collected by 3 mm interelectrode spacing (r = 0.708, p < 0.01; vs r = 0.247, p < 0.01). The regression line is shown in Figure 1B. Four of the five induced ventricular tachycardias in the...
three cases had an isthmus in the area with 2-4 mm wall thickness.

**Conclusion:** In cases of old myocardial infarction with thin scars, bipolar voltage maps with widened interelectrode spacing represented wall thickness and identified heterogeneous scar as arrhythmogenic substrate.

**PO-635-08**

**REDUCTION IN ANTI-ARRHYTHMIC DRUG USE AND IMPROVEMENT IN QUALITY OF LIFE FOLLOWING THE HYBRID CONVERGENT PROCEDURE IN PERSISTENT AND LONGSTANDING PERSISTENT ATRIAL FIBRILLATION: A CONVERGE TRIAL ANALYSIS**

David B. De Lurgio MD, FHRS; Karl J. Crossen MD; Christopher Blauth; Faraz Kerendi; Saumil R. Oza MD; Anthony R. Magnano MD, FHRS; Mark mostovych; Michael Halkos; David R. Tschopp MD, FHRS and Jaswinder Gill

**Background:** CONVERGE (NCT01984346) was a prospective, multicenter, randomized controlled trial comparing effectiveness of combined epicardial and endocardial (hybrid convergent, HC) ablation to endocardial catheter ablation (CA) for treatment of persistent atrial fibrillation (PersAF) and longstanding PersAF (LSPAF). In 2020, we reported that CONVERGE met protocol-stated primary safety and effectiveness. Here we report CONVERGE quality of life (QOL) results and anti-arrhythmic drug (AAD) utilization after HC.

**Objective:** To determine QOL and AAD utilization changes following HC.

**Methods:** Eligible pts were 18-80 yrs, had drug-refractory symptomatic PersAF or LSPAF, and left atrium diameter ≤6.0 cm. Enrolled pts were randomized 2:1 to HC or CA. AAD use at baseline and any time after a 3-mos blanking period through 12-months post-HC procedure were evaluated. Atrial Fibrillation Severity Scale (AFSS) and the 36-Item Short Form Health Survey (SF-36) were assessed at baseline and 12 mos.

**Results:** 102 pts were treated with HC; 38 pts had LSPAF. The proportion of pts in the HC arm who used Class I/III AADs post-blanking period through 12 mos was 34.3%, vs 84.3% at baseline; for LSPAF pts, the proportions were 31.6% through 12 mos vs 71.1% at baseline. AAD use was similar through 12 months with 37.2% of all pts and 31.6% of LSPAF pts on AADs.

**Conclusion:** In CONVERGE, ~66% of patients were off AADs through 12-mos follow-up representing a ~60% relative reduction in AAD use when compared to baseline. QOL measures improved at 12 months follow-up with HC.

**Table. Mean Atrial Fibrillation Severity Scale and SF-36 Results Following Hybrid Convergent Procedure (ITT population) at Baseline and 12 Months Follow-Up**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>12 months</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFSS Composite</strong></td>
<td>31.7 (n=101)</td>
<td>22.4 (n=97)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td><strong>AFSS Overall Symptom</strong></td>
<td>4.5 (n=97)</td>
<td>4.5 (n=97)</td>
<td>0.606</td>
</tr>
<tr>
<td><strong>SF-36 PCS</strong></td>
<td>43.1 (n=101)</td>
<td>46.8 (n=97)</td>
<td>0.016</td>
</tr>
<tr>
<td><strong>SF-36 MCS</strong></td>
<td>53.1 (n=101)</td>
<td>53.9 (n=97)</td>
<td>0.606</td>
</tr>
</tbody>
</table>

*Scores range from 0 to 100 and higher values represent greater burden. **P** values based on paired t-test for baseline vs 12-months.

**POSTER PO-636:**

**PO-636-01**

**DURABILITY OF PULMONARY VEIN AND POSTERIOR WALL ISOLATION FOLLOWING HYBRID CONVERGENT ABLATION FOR LONG STANDING PERSISTENT ATRIAL FIBRILLATION**

Adnan Ahmed MD; Rishi Charate MD; Peter H. Park MD, FHRS; Rangarao V. Tummala MBBS; Ahmed romeya; Justin Van Meeteren; Rakesh Gopinathnair MA, MD, FHRS; Dhanunjaya R. Lakkireddy MD, FHRS and Naga Venkata Krishna Chand Pothineni MD

**Background:** Hybrid convergent ablation has been shown to be superior to endocardial catheter ablation in patients with long standing persistent AF (LSPAF). However, data on durability of a hybrid ablation lesion set during repeat procedures is sparse.