Cardioversion of Persistent Atrial Fibrillation Before High Energy Ablation Does Not Improve Outcomes in Short Term Follow Up: Preliminary Analysis

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Ruifang Yang, MD, PhD, Jose L Henao MD, David Goldgrab DO, Sokol Kalaveshi MD, Stephen Mester, MD, FACC, Christian Perzanowski, MD, FACC, FHRS, FAHA

Catheter ablation of persistent atrial fibrillation (PeAF) is associated with more complexity of procedures including longer procedure times and lower long-time success rated compared to paroxysmal AF. The optimal approach of ablating PeAF has yet to be defined. By convention, mapping/ablation of PeAF is most often performed in AF. The success of ablation hinges on catheter contact and achieving lesion transmurality.

Hypothesis

Ablation efficacy would improve during sinus rhythm (SR) given stability and predictability of catheter contact.

Methods

Non-randomized comparison of PeAF patients who underwent ablation in SR (n=26) under a new practice protocol versus a cohort of PeAF ablated in AF (n=54). The lesion set was the same for both groups, WACA ± BOX. Study group was treated with higher energy of 45 W vs 40 W for AF; impedance drop of 10 ohms to achieve pulmonary vein isolation (PVI).

Results

<table>
<thead>
<tr>
<th>Table 1. Sample Characteristics</th>
<th>Ablated in SR (n=26)</th>
<th>Ablated in AF (n=54)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (% of Male)</td>
<td>58%</td>
<td>57%</td>
<td>0.90</td>
</tr>
<tr>
<td>Age (years)</td>
<td>69</td>
<td>67</td>
<td>0.49</td>
</tr>
<tr>
<td>Procedure time (mins)</td>
<td>135</td>
<td>129</td>
<td>0.33</td>
</tr>
<tr>
<td>Fluoro time (mins)</td>
<td>3.81</td>
<td>4.02</td>
<td>0.73</td>
</tr>
<tr>
<td>Post-op follow time (days)</td>
<td>128</td>
<td>278</td>
<td>0.00031</td>
</tr>
<tr>
<td>% in Sinus Rhythm</td>
<td>81%</td>
<td>80%</td>
<td>0.89</td>
</tr>
<tr>
<td>Left Atrial Size (mm)</td>
<td>41.9</td>
<td>41.2</td>
<td>0.57</td>
</tr>
<tr>
<td>LVEF &lt; 50%</td>
<td>35%</td>
<td>28%</td>
<td>0.54</td>
</tr>
<tr>
<td>OSA (%)</td>
<td>50%</td>
<td>44%</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Conclusions

Our preliminary data does not seem to support an advantaged or improved outcome using an ablation strategy in SR for this population.

Data accumulating and longer follow-up time are being employed to corroborate this observation and determine the most effective approach of ablating peAF.

Acknowledgements

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References