PROCEDURAL BENEFIT OF SUBSTRATE BASE ABLATION VERSUS CONVENTIONAL MAPPING AND ABLATION OF CLINICAL STABLE VENTRICULAR TACHYCARDIA: RESULTS FROM THE VISTA RANDOMIZED TRIAL

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Arrhythmias and Clinical EP: VT
Presentation Number: 1218-237

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Background: Catheter ablation of ventricular tachycardia (VT) in patients with ischemic cardiomyopathy (IC) represents a valid therapeutic option versus AADs to reduce ICDs shocks and freedom from VT. We sought to evaluate whether a substrate-based ablation approach produces procedural benefit when compared to conventional ablation of the clinical VT in a randomized prospective trial.

Methods: This was an open-label, randomized, multicenter study. Patients were randomly assigned (1:1 ratio) to undergo ablation only of the presenting clinical VT at the site of the critical isthmus (group 1) versus a substrate-based ablation approach (group 2). Substrate ablation was empirically extended throughout the entire scar to target all “abnormal” electrograms. Procedural parameters were collected and analyzed.

Results: The final study population was composed by 118 pts (60 pts assigned to group 1, and 58 to group 2). The clinical baseline characteristics were not different between groups. The mean cycle length of the induced clinical VTs was 410±90 ms in group 1 and 399±86 ms in group 2 (p=0.49). In group 2, pre-ablation induction was not required by protocol and was performed in 22 patients. The procedural (4.6±1.6 and 4.2±1.3 hours [p=0.14]) and fluoroscopy time (28±16 and 35±32 min, p=0.13) were not statistically different between groups. However, after removing group II patients where induction of VT was performed (22 cases), the procedural time decreased to 3.4±1.7 hr, which was significantly shorter than in group I [(4.2±1.3 vs. 3.4±1.7), p= 0.018]. Radiofrequency time was substantially longer in group 2 (35±27 and 68±21 minutes [p<0.001]). In addition, cardiopulmonary support for hemodynamic instability was used in 8 patients in group 1 and none in group 2 (p = 0.006).

Conclusion: This is the first randomized trial showing that a substrate-based approach allows ablation in sinus rhythm with a shorter procedural time and a lower likelihood to require hemodynamic support.