

**AB9-2****FIRST HUMAN EXPERIENCE WITH AN IRRIGATED TIP CATHETER FOR REMOTE CIRCUMFERENTIAL PULMONARY VEIN ABLATION. PRELIMINARY RESULTS IN 33 PATIENTS WITH ATRIAL FIBRILLATION**

*Carlo Cp. Pappone, MD, PhD, Andrea Radinovic, Gabriele Paglino, Gabriele Vicedomini, Simone Gulletta, Simone Sala, Giuseppe Augello, Patrizio Mazzone, Giuseppe Ciconte, Massimo Saviano and Vincenzo Santinelli, MD. San Raffaele University Hospital, Milan, Italy*

**Introduction:** Currently, remote CPVA is performed with solid-tip catheters. However, irrigated-tip ablation has the advantage of delivering greater power without increasing temperature tip, which enables deeper and wider lesions. We sought to test for the first time feasibility, safety, and acute efficacy of remote irrigated-tip ablation in consecutive patients undergoing CPVA.

**Methods:** Remote CPVA was performed using a novel irrigated-tip magnetic catheter (Stereotaxis, St. Louis, Missouri) with a fixed power of 30 W. Ablation endpoints were atrial potential abatement > 90% and PVI as verified by Lasso catheter. Primary endpoints were feasibility, safety and acute efficacy of such catheter. RF applications were delivered up to 15 seconds and repeated if necessary. Temperature tip, impedance and watt were continuously monitored.

**Results:** A total of 33 patients (mean age 59.9±10.5 years; 21 males) with symptomatic drug-refractory AF were included into the study. Endpoints were successfully achieved in all patients and the PVs were completely disconnected. The total ablation time was 26.3 ± 11.5 min, with temperature of about 37°C. Abatement of atrial potentials was associated with a significant impedance drop in all targets (p<0.0001). The highest impedance drop was observed on the Roof (from 113.8 to 103.2) and LSPV (from 114.0 to 104.7) while the lowest in the isthmus line (from 115.1 to 109.2). Navigation and mapping was more challenging with irrigated-tip than with solid magnetic catheters probably due to their different architecture. Being hollow inside, the magnets used at the tip are smaller potentially reducing their responsiveness to the magnetic field. No major complications occurred during and after the procedure. In just one patient tip charring occurred.

**Conclusions:** These preliminary results indicate that remote ablation with irrigated-tip catheters is safe and feasible while reaching all acute endpoints, including PVI. Temperature and impedance monitoring may improve safety of remote irrigated-tip RF ablation.

**AB9-3****LOW ENERGY PHASED RADIOFREQUENCY FOR MULTIELECTRODE ABLATION OF PAROXYSMAL ATRIAL FIBRILLATION**

*Lam Dang, PhD, Hakan Oral, MD, Fred Morady, MD, Reto Candinas, MD and Christoph Scharf, MD. Cardiovascular Center, Klinik im Park, Zürich, Switzerland, University of Michigan, Ann Arbor, MI*

**Introduction:** Pulmonary vein isolation (PVI) with standard radiofrequency (RF) in the left atrium has been associated with complications such as char formation and atrioesophageal fistulas. New multielectrode catheters for mapping and ablation can reduce RF to 3-5 W (max 10W) by delivering phased unipolar and bipolar RF provided individually to each electrode pair by a multichannel RF Generator.

**Methods:** 93 pts with paroxysmal AF underwent PVI after induction of AF using a circular mapping and ablation electrode (Pulmonary vein ablation catheter PVAC). Additional ablation of

complex fractionated atrial electrograms (CFAEs) at the septum was performed in pts without conversion to sinus rhythm after PVI, using a multiarray septal ablation catheter (MASC) or a multiarray ablation catheter (MAAC) for CFAE ablation in the left atrium. Follow-up including 7d continuous ECG monitoring is currently available in 63 pts after 3.8 ± 1.5 months.

**Results:** During a mean procedure time of 2.1h ± 38min, a total of 36 ± 14min of fluoroscopy was used to apply 47 ± 14min of RF energy. During the initial learning curve standard RF had to be applied in 10 pts to complete PVI. In 25 pts (27%) CFAE ablation was performed at the septum and LA and AF converted in 65 pts. (70%). No complications were noted. Currently 44/63 pts (70%) are free of atrial fibrillation without antiarrhythmic drug (AAD) treatment and additional 11/63 (17%) are in sinus rhythm on AAD or improved symptoms during short term follow up. The procedure was unsuccessful in 8 pts (13%).

**Conclusions:** Multipolar mapping and ablation electrodes using phased uni/bipolar RF require 10-20% of standard RF energy. After a short learning curve, pts with PAF can be treated effectively with short procedure times.

**AB9-4****WARFARIN IS NOT NEEDED IN ALL PATIENTS FOLLOWING ATRIAL FIBRILLATION ABLATION PROCEDURES**

*John D. Day, MD, Tami L. Bair, B.S., Heidi T. May, B.S., Brian G. Crandall, M.D., J. Peter Weiss, M.D., Jeffrey L. Anderson, M.D., Donald L. Lappe, M.D., J. Brent Muhlestein, M.D., Jennifer Nelson, R.N., Scott Allison, B.S., Thomas Foley, B.S., Lars Anderson, B.S. and T. Jared. Bunch, M.D.. Intermountain Heart Rhythm Specialists, Intermountain Medical Center, Salt Lake City, UT, Intermountain Medical Center, Salt Lake City, UT, Mayo Clinic, Rochester, MN*

**Introduction:** The recently published HRS/EHRA/ECAS Atrial Fibrillation Ablation Consensus Statement recommended that warfarin should be used for at least 2 months following an AF ablation in all patients regardless of stroke risk factors. We sought to evaluate the impact of these recommendations from our AF ablation cohort of patients.

**Methods:** A total of 540 consecutive patients who underwent 692 AF ablation procedures from a single center were evaluated. The 2 month post-procedure stroke/transient ischemic attack (TIA) risk, in relationship to the CHADS2 score, was evaluated. Patients who were on warfarin (goal INR: 2-3) prior to and immediately following the procedure were compared to those patients on aspirin (81-325 mg/day) who had never been on warfarin. Aspirin without warfarin was only used in low-risk patients with paroxysmal AF with no episodes of AF lasting longer than 24 hours either before or after the procedure.

**Results:** Of the 540 patients, 178 (33%) were on aspirin and 362 (67%) were on warfarin. The average CHADS2 score of patients on aspirin was 1.48 +/- 1.12 and 1.70 +/- 1.23 for patients on warfarin (p=0.05). During the first 2 months following the procedure, there were no strokes/TIA in the aspirin group and 5 strokes/TIAs in the warfarin group. Of those patients with a stroke/TIA during the first 2 months following the procedure, the average CHADS2 score was 2.83 (p=0.2).

**Conclusions:** Select patients with paroxysmal AF, low CHADS2 scores and who do not have any long episodes of AF either before or after AF ablation (>24 hours) can safely be discharged following an AF ablation on aspirin alone. These data suggest that in low risk patients, peri- and post-procedural warfarin therapy may not be indicated.