CA-535-04

PULMONARY VEIN ISOLATION FOR ATRIAL FIBRILLATION USING TRUE HIGH POWER SHORT DURATION VS. CRYOABLATION

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Background: Pulmonary vein isolation (PVI) in patients (pts) with paroxysmal (PAF) and persistent (persAF) atrial fibrillation is equally achievable and effective using a cryoballoon (Cryo) or radiofrequency (RF) catheter ablation (CA). The newly introduced high RF power short duration ablation (HPSD) technique has shown promising results in clinical trials. However, data comparing HPSD-to Cryo-PVI is sparse.

Objective: We sought to investigate success rates and procedural differences of HPSD-PVI vs. Cryo-PVI in patients undergoing ablation for PAF and persAF.

Methods: Between 01/2018 and 08/2021 all consecutive pts. undergoing de-novo PVI (HPSD or Cryo) were included in this analysis using specifically designed database. A power setting of 70W/7s (70W/5s at posterior wall) was considered as HPSD. For Cryo-PVI a 28mm balloon was used. Follow-up consisted of outpatient pts visits, tele-consultation, 48h holter ECG and CIED interrogation if applicable.

Results: A total of 721 pts (46 HPSD, 675 Cryo) were analyzed. In all HPSD (n = 46; 19 PAF [41%], 27 persAF [59%]) and Cryo pts (n = 675; 252 PAF [37%], 423 persAF [63%]) PVI was successfully achieved. Procedure duration was significantly longer for HPSD (108 ± 35min vs. 77 ± 26min, p < 0.01) as compared to Cryo. Fluoroscopy time (HPSD 14 ± 5min and Cryo 14 ± 7min; p = 1) and dose (HPSD: 3798 ± 2460mGy*cm²; Cryo: 3199 ± 4138mGy*cm²; p = 0.333) was comparable in both groups. No major complications occurred in the HPSD group whereas for Cryo in 25 (3.7%; p = 0.296) pts complications occurred (16 groin bleedings, 7 transient phrenic nerve palsies, 2 tamponades [1 lethal]). At a follow-up of 290 ± 135 days significantly more pts were free from any atrial arrhythmia after a single procedure using HPSD (38 HPSD [82.6%] vs. 458 Cryo pts [67.9%]; p = 0.047).

Conclusion: Pulmonary vein isolation using HPSD is equally effective and safe to Cryoballoon-PVI in patients with PAF and persAF. This analysis revealed a significantly higher arrhythmia free survival after HPSD as compared to Cryo with low complication rates in this relatively small HPSD cohort. The procedure duration for Cryo was significantly shorter. Currently a prospective trial is conducted to corroborate these findings.

ABSTRACT CI-563:
Sex differences in CIEDs and Arrhythmia Syndromes

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CI-563-01

SEX DIFFERENCES IN THE ASSOCIATION OF OBESITY AND VENTRICULAR ARRHYTHMIA IN PATIENTS WITH IMPLANTABLE CARDIOVERTER-DEFIBRILLATORS

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Background: Previous studies have reported sex differences in the association of overweight and obesity (OW/OB) and cardiovascular outcomes, including hypertension, atrial fibrillation, and coronary artery disease. However, data regarding